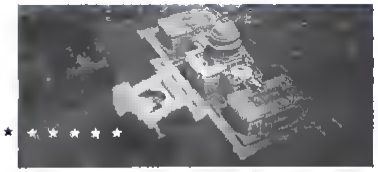
Aviation News

NOVEMBER 2, 1946

Bell's Supersonic Speedster: *First flight picture of the Bell XS-1, flying laboratory, which will make the initial attempt to break through the sonic barrier and achieve supersonic flight. Carrying a full weight complement including rocket engines, fuel and instruments the XS-1 is now making test flights as a glider released from a specially equipped B-29 at AAF's Muroc Lake testing center. First flight powered by Reaction Motor's 6,000-pound static thrust rocket engine is scheduled for late December with Bell test pilot Chalmers (Slick) Goodlin at the controls. See page 10 for additional photo. (AAF photo)*

Washington Observer



COMMITTEE MAPS QUIZ AGENDA — Senate's War Investigating Committee (1) has already placed on its agenda a "careful and thorough" look-see at wartime aircraft profits; (2) is likely to review contracts of U. S. airlines with the Air Transport Command and the Naval Air Transport Service; but (3) will not carry out the previously expressed desire of Sen. Brewster, the Committee's new chief, to investigate the extent to which—if at all—politics has influenced CAB route decisions. Brewster admits that the latter subject does not come within the scope of the group.

* * *

COMMUNITY COMPANY ISN'T DEAD — Sen. Brewster, commenting on the report on this page last week that airline executives doubt if the senator could marshal support in Congress for a community airline, now that the route pattern has jelled, said he is ready to push such legislation, regardless. It is also known that Sen. McCarran plans to reintroduce his all-American flag line. Establishing a community company would be a move to end chaos, rather than create it, Brewster contends. He claims that TWA has requested an RFC loan of $40,000,000 to $50,000,000, and cites this fact as evidence of growing deficits by U. S. carriers in the foreign field. He further contends that subsidies which will be required exceed ability of the Post Office Department to meet in air mail payments.

* * *

SECRETARIES INSPIRE UNIFIED PROCUREMENT—President Truman's letter to Richard R Deupree, chairman of the Army-Navy Munitions, Board, giving Deupree power to consolidate procurement, was inspired by the Secretaries of War and Navy. It was not a move by the Board toward unification. Deupree says he accepted the power reluctantly and does not intend to use it unless the services fail to work out their own joint procurement problems.

* * *

MAKING ADMIRALS PUBLICITY CONSCIOUS —An almost insurmountable problem of Navy Public Relations officers has always been education of obstinate admirals in the advantages of a good press. The brass hats usually consider that no announcement is better than any public statement, and in the opinion of newsmen are security-conscious to the point of impossibility. Latest hopeful sign, however, is a current overhauling of Navy's security regulation system to create better liaison between security and public relations officers. One of the results will be a press release as soon as a new Navy aircraft makes its first flight. Past policy has dictated holding release for months. Navy public relations officers complained about last week's *Aviation News'* editorial revealing delivery of only two jet planes this year, although Britain is beating the tom toms about its decision to produce nothing but jet-type fighters in the future. The editorial was "misleading," not inaccurate, it was said. The public has been told about few new Navy projects, but this will probably be corrected shortly.

* * *

NEW REPORT ITEMIZES WARTIME OUTPUT —Although no announcement has been made, a new 200-page recapitulation of wartime aircraft and engine production statistics is due to become a CAA best seller as word of its existence circulates. CAA's Office of Aviation Information took over the records and some personnel of the Aircraft Resources Control Office and completed the document. The volume shows month by month, plant by plant, in units and airframe weight of horsepower, acceptance by the services of aircraft, aircraft engines, gliders, and controllable propellers for 1940-1945, with additional industry employment statistics.

* * *

HOUSE TRANSPORTATION REPORT DUE — Prof. John Frederick of University of Maryland expects to submit a comprehensive report covering the whole transportation field, and making recommendations for basic legislation, to House Interstate and Foreign Commerce Committee chairman Clarence Lea by the first of December. Frederick, directing the committee's transportation study, has been reviewing voluminous transport data and recommendations submitted to the group early in the year by transport organizations and individuals. If approved by the committee, the study will be filed as a committee report.

* * *

SKILLED ASSISTANTS ABOUND IN CAPITOL— Washington presently is the nation's No. 1 source of diplomatic, skilled office assistants and secretaries, as experienced men and women on Capitol Hill—mostly Democrats—prepare to give up their jobs in defeated congressmen's offices and seek other fields. They have learned to phrase letters to constituents which rival the products of New York department store ad writers. They have learned to make visitors feel that it was not too necessary for them to see their congressman after all. They are public relations experts and specialists in practical psychology. As every Washingtonian knows, the congressman's and senator's office revolves about the secretary. Most of them are bargains, despite higher than average income. For inquiries, call at any defeated public servant's office on "the Hill."

AVIATION NEWS

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Published weekly by McGraw-Hill Publishing Co., Inc. Price 50c copy. Allow ten days for change of address. Subscription rates—United States and possessions $5 a year; $8 for two years; $10 for three years. Canada, $6 a year; $10 for two years; $12 for three years. Pan American countries $15 for one year; $25 for two years; $35 for three years. All other countries $20 a year; $30 for two years; $40 for three years. Entered as second-class matter July 31, 1945 at the Post Office at New York, New York, under the Act of March 3, 1879. Printed in U. S. A. Cable Address "McGrawhill, New York." Please indicate position and company connection on all subscription orders.

JAMES H. MCGRAW, Founder and Honorary Chairman. JAMES MCGRAW, Jr., President. CURTIS W. MCGRAW, Senior Vice-President and Treasurer. HOWARD EHRLICH, Vice-President and General Business Manager. EUGENE DUFFIELD, Editorial Assistant to the President. JOSEPH A. GERARDI, Secretary. and J. E. BLACKBURN, Jr., Vice President (for Circulation operations). 330 West 42nd Street, New York 18, N. Y. British office: Chicago, 520 North Michigan Avenue. San Francisco: 68 Post Street. Los Angeles: 601 So. Hope Street. Aldwych House, Aldwych, London, W. C. 2. Washington, Philadelphia, Cleveland, Detroit, St. Louis, Boston, Atlanta.

Postage Guaranteed.

Volume 6, No. 22

News Digest

DOMESTIC

Major Albert Bond Lamberg, 70, a leader in St. Louis aviation for 40 years and a backer of Charles A. Lindbergh's flight to Paris in 1927, died at his home in St. Louis.

Donnell W. Dutton, director of the Daniel Guggenheim School of Aeronautics, has been appointed scientific research adviser to the War Department.

AAF commanding generals representing all overseas and continental commands met with AAF chief Gen. Carl Spaatz to outline organization of the Air Forces for the next two years.

General Electric scientists turned a cloud three miles long into snow by sowing it with dry ice pellets from an airplane. AAF is studying the technique for its possibilities as a fog disperser.

New York Board of Estimate approved $975,000 for preliminary construction and planning in connection with the $12,000,000 program to rehabilitate LaGuardia field.

Rocket and jet propulsion engineers will gather at the First National Convention of the American Rocket Society, Dec. 5-6 in New York.

FINANCIAL

Alaska Airlines reported a net loss for the first 10 months of 1946 of $428,286 compared with a loss of $116,376 the previous year.

United Aircraft Corp. declared a 50-cent dividend on common stock stock payable on Dec. 16. This brings the yearly dividend total to $1 compared with $2 for 1945.

Glenn L. Martin Co. declared a quarterly dividend of 75 cents a share on common stock payable Dec. 20. This is the fourth 75-cent dividend paid by the company this year.

FOREIGN

Crash of a KLM airliner while trying to land at Schipol Airdrome, Amsterdam, killed 25 persons.

An AAF C-47 crashed into the sea off Iwo Jima killing 23 military passengers.

Crash of a Mexican airliner in the mountains between Mexico City and Veracruz killed 16 persons.

United States and the Philippines signed a commercial aviation agreement following the standard form of all American negotiated bilateral air agreements.

▶ More repercussions of difficulties in the lightplane industry are heard in the West where Culver Aircraft Corp. has severely cut back production and laid off a large percentage of workers at its Wichita, Kans., plant. Spartan Aircraft Co. of Tulsa has decided to postpone production of its new Spartan Executive Model 12 because of increased production costs and delays in obtaining materials. Maxwell Balfour, Spartan president, estimated that present price levels would boost production cost of the Spartan to $40,000.

▶ *Northrop Aircraft Inc., NACA, and Frederick Flader, Inc., jet turbine manufacturers, have provided personnel for the project to develop electric power from atomic energy now under way at the Oak Ridge and Hanford plants of the Manhattan project. Fairchild Engine & Airplane Co. has the basic contract for applying atomic energy to aircraft power plants.*

▶ Boeing Aircraft's president William Allen indicated that the firm is working on design of a large new flying boat for international airline use.

▶ *Glenn L. Martin Co. is putting on a determined home stretch drive to complete its C-54 reconversion program by early January to free personnel and equipment for production of 202 and 303 transports. Martin has delivered 85 converted C-54s to the airlines and has 15 to go.*

▶ Although Goodyear Aircraft did not display any aircraft at the National Aircraft Show, one of the company's subcontractors reported orders for parts for 25 amphibians.

▶ *Piper Aircraft is making quiet, but effective, efforts in the export field. One salesman recently returned from a swing through Latin America with orders for 600 planes. Piper is still reluctant to make the extent of its export business known because it fears domestic dealers will be offended.*

▶ North American Aviation has produced more than 250 Navion personal planes, but less than 50 have been delivered because of a slight change that had to be made on the engines.

▶ *A new firm, Quantum Research Corp., Paterson, N. J., is working on jet propulsion for helicopters. Company has a helicopter flying and is now experimenting with the possibility of using jet to furnish forward speed after the take-off, theory is to disengage the rotor and let it autorotate so that the net effect would be in the nature of a jet-propelled autogyro. Aim is to attain a speed of 200 mph.*

▶ Piper Aircraft is credited with one of the best long-range promotion stunts of the show. All of the exhibitors had piles of literature to distribute and the swarms of schoolboys that hit the bomber plant over the week-ends were the most avid takers. Piper gave the kids shopping bags in which to carry the stuff, each bag, of course, being emblazoned with the Piper name.

▶ *A supplier of Edo aircraft reported parts orders for about 20 of the XOSE-1 utility amphibian Edo is building for the Navy.*

▶ Plans of Jack & Heintz to build a light, powerful, cheap engine for personal aircraft was one of the hottest topics as the National Aircraft Show opened and quickly became one of the coldest. J&H has put the lid on completely, instructing its personnel to do no talking at all about the engine.

▶ *Hughes Aircraft's suit against C. W. Perelle, its former general manager, probably will not be pressed. Amount sought, $375,000, is the same as the five-year salary contract that Hughes signed with Perelle.*

VOLUME 6 • NUMBER 22 **Aviation News** McGRAW-HILL PUBLISHING CO., INC. November 25, 1946

Second Aircraft Show Foreseen On Basis of Cleveland Results

First grand-scale event up to expectations as public and industry view latest models; repeat performance likely on West Coast late next year.

By WILLIAM KROGER

Indications are that even before the National Aircraft Show completed its ten-day run yesterday at the former Fisher bomber plant at Cleveland Municipal Airport, it had sufficiently lived up to expectations to warrant staging another grand-scale show next year. It will be held on the West Coast, probably in the Fall, rather than in the Spring as originally contemplated.

In what way the show justified the hopes of its sponsors, however, was the big question. As promotion of air power and air defense it should be effective. As a sales medium it had some results although the character of the show did not call for its being strictly for selling. As a force for unifying and promoting the industry it seemed worth while. As a popular attraction it was superb.

▸**Sunday Crowd**—On the first Sunday the show was open, more than 47,000 paid admissions were recorded and show officials declared it the greatest crowd ever to attend an indoor exposition in Cleveland in one day. By mid-week attendance neared 80,000.

The show was shrewdly laid out. Visitors entered by way of a ramp and the first glimpse of the show was from a balcony overlooking the entire display. Breasting the aisle at the foot of the stairway were some of the personal planes and the traffic flowed naturally from there to the helicopter display. The visitor was caught immediately by the two types of aircraft of most interest.

▸**Personal Plane Prospects**—Carefully assessing the value of the show, personal plane manufacturers were aware that it was the first opportunity for more people to see first-hand more personal planes than ever before. Even on the mid-week days of light attendance, the personal plane and helicopter exhibits pulled the throngs.

Personal plane manufacturers had the thorniest sales problem of the show. Intent upon building up relations with distributors and dealers, they had to decide what to do about orders tendered on the spot. Republic Aviation did not attempt to make sales. It picked up about a dozen sound prospects and turned the names over to its Cleveland dealer. This referral system was generally employed by other manufacturers and sales made at the show were in most cases credited to the local dealer.

▸**Sales Reported**—North American Aviation reported 25 positive sales for the Navion. Cessna had two definite sales and more than 50 good prospects. Aeronca, Stinson, Luscombe, Ercoupe, Bellanca, Piper, all reported numerous prospects. Beech was not accepting orders for its Bonanza, four-place personal plane, but reported two definite sales of its twin-engine Model 18.

All through the week at Cleveland, industry soul-searching went on. If there was cause for gratification at the crowds minutely examining the personal planes, there was also an indication of great interest in planes the traveling public will use on the airlines. Seats were tested, aisles measured, head room gauged and other details of comfort examined.

The Army and the Navy let the public get a better appreciation of its air weapons and devices than ever before. The Boeing B-29 Dreamboat was an eye-catcher; the Navy's section containing some of its special devices was always crowded.

Consolidated Bubbles: *One of the huts of the National Aircraft Show at Cleveland was this $100,000 exhibit of Consolidated-Vultee featuring seven revolving, illuminated spheres depicting the progress of transportation from a covered wagon to a Convair Model 240 transport*

As an industry show for the industry, it has had peculiar aspects. One was the realization that during the war some manufacturers were so intent upon their own problems and production that they were not fully aware of what competitors were doing, or in some instances, of suppliers, what recent products their own customers were developing that might furnish a new market.

There were also instances of engineers never before having had the opportunity to see and examine developments in their own field, although having been aware of their existence.

Northrop Aircraft for the first time put on display its Turbodyne I, first turbo-prop engine to be built and tested in this country. One of the country's foremost jet propulsion engineers, developer of jet engines now in use, carefully photographed and studied the 2,400 hp Turbodyne.

Keyed specifically to the interests of those who manufacture

aviation products and those who sell them, the National Aircraft Show furnished an opportunity for better understanding of common problems within the industry and there was no ducking of the problems. Curtiss-Wright Corp announced its plans for a new four-engine cargo plane and while frankly recognizing that "this might seem a peculiar time" to announce a new plane, in fare of the many predictions that the industry is declining, it believed the market would be there when the plane was ready.

Leonard S. Hobbs vice-president, engineering, United Aircraft Corp., discussed the utilization of jet power in commercial planes and discounted, on the basis of his own personal observation, British claims that they will have jet-powered transports operating across the Atlantic within a few years. Hobbs thinks it will be at least 1950 before that development comes.

Meetings of industry groups during the show pointed to its worth as a meeting ground. Most of the lightplane manufacturers held dealer's conferences. War Assets Administration held a meeting of its agents handling surplus parts and components. National Aeronautic Association's board of directors met, so did the Personal Aircraft Council, the board of governors of the Aircraft Industries Association and the National Aviation Trades Association.

Aircraft Show: *Balcony view of part of National Aircraft Show in Cleveland. In foreground is Cessna 140 with new Edo floats, the Aeronca Chum is just beyond, engines and accessories, Republic Seabee, top left, Beech Bonanza at right center, while Convair, AAF, Navy and Marine exhibits are in background. (Martin & Kelman photo)*

XS-1 Technique

AAF technique used in loading atomic bombs into B-29s is employed at Muroc flight test base in attaching Bell's XS-1 transonic rocket plane to the parent B-29 which carries it aloft.

At Kwajalein the atom bomb dropped over Bikini was raised into the bomb bay from a pit dug into a loading ramp. At Muroc the XS-1 is lowered into a pit, allowing the bomber to straddle the experimental plane, which then is raised until the upper portion of its fuselage is within the B-29 bomb bay.

In one of a series of recent release and glide tests of the XS-1 at Muroc the plane was brought safely to earth still attached to the B-29. The XS-1 pilot had been unable to open the cockpit canopy to enter the rocket plane at release altitude.

Whether it would be necessary to have subsequent national aircraft shows as elaborate as that last week at Cleveland was the subject of general discussion. The aircraft industry, in the past relatively small in the industrial picture in peacetime, tackled a job that has been undertaken in the past by few industries even substantially larger.

Officials of sponsoring groups acknowledge that mistakes were made and that there was a good deal of groping for solution to the management problems. The explanation was that it was this country's first experience with a show of such magnitude. To anyone scanning the 500,000 sq. ft. display from the balcony entrance, it was a good explanation.

Services Committee Merger Is Approved

The House and Senate Republican steering committees have agreed "overwhelmingly" to move ahead with mergers of the Military and Naval Affairs Committees of the two houses into House and Senate Armed Services Committees—proving to be the most controversial stipulation in the committee realignment plan laid down in the 1946 Congressional Reorganization Act.

Naval Affairs committeemen, Republican as well as Democratic, viewing the military-naval committee merger plan as a forerunner to merger of the armed services—which they have joined the Navy in vigorously opposing—are determined to block it.

Although not a member of the House GOP steering committee, Rep. W. Sterling Cole (R., N. Y.), top-ranking Republican on House Naval Affairs, attended last week's steering committee sessions to object to the military-naval committee merger.

Cole won a minor victory. The steering committee endorsed the merger, but reserved for the opposition to it the right to submit a substitute proposal at the opening of Congress. House Naval Affairs committeemen have been considering a plan under which the Military and Naval Affairs Committees would retain their separate identities and a liaison group of the top-ranking members of each committee would consider subjects affecting both services.

When Senate Naval Affairs Committee members return to Washington, it is expected that they will register opposition to the military-naval committee merger plan on the other side of Capitol Hill.

Successor to the Corsair: *One of the latest additions to the Navy's rapidly growing stable of jet fighters is the Chance Vought XF6U-1. Built of a new type of material known as "Metalite" the Vought jet plane is powered by a new type Westinghouse jet. (Navy photo)*

Navy Reveals Two New Jet Fighters

North American XFJ-1 and Chance Vought XF6U-1 powered by General Electric TG-180 and new Westinghouse jet are rated as "better than 500 mph" after initial test flights at Muroc Lake.

Successful flight testing of two recent additions to the Navy's rapidly growing stable of jet fighters was revealed last week. The new planes are the North American XFJ-1 and the Chance Vought XF6U-1, both of which have been flight tested at the AAF's Muroc Lake test center.

Both are designed for both carrier and land based operations. Carrier take-offs will be made by special catapults recently developed for the Navy. Normal jet power will be used on land.

▸**Barrel Shape**—The XFJ-1 is a stubby, barrel shaped plane with a very thin laminar flow wing made possible by incorporation of the air intake and engine into its fuselage. It is powered by a General Electric TG-180 and rated at "better than 500 mph."

It has a high vertical stabilizer with a 10-degree dihedral of the horizontal surfaces to place the tail assembly out of the wing shock wave area at high speeds. This increases stability and provides better control at the low speeds necessary to carrier landings.

▸**Made of "Metalite"**—The XF6U-1 is Vought's successor to the Corsair and is made of a revolutionary new material called 'Metalite.' This material was developed for the Navy by Chance Vought and is a sandwich of two thin sheets of high strength aluminum alloy enclosing a balsa wood core. Metalite is expected to be the Navy's answer to the problem of an absolutely smooth finish that will hold up under all conditions of flight loading and eliminate the vexing drag problem at high speeds caused by skin wrinkles of conventional finishes. The XF6U-1 has straight wings without the gull effect of the Corsair and is powered by a new Westinghouse jet unit.

Both planes have tricycle gear and droppable wing tanks. Armament of six .50 caliber machine guns is in the nose of both planes.

North American's Navy Jet Fighter: *First photo of the new North American jet fighter, XFJ-1, built for the Navy and now undergoing test flights at Muroc Lake, Calif. Powered by a General Electric TG-180, this plane is classed by the Navy as "better than 500 mph." (Navy photo)*

Bell 'Copter Sales Soaring to $1,000,000

First sales of Bell helicopters, including first in the export market, were announced last week at the National Aircraft Show. Sales were all initiated or closed prior to the show, and involve about 40 helicopters costing about $1,000,000.

All orders are for the two-place Model 47B which is now on the production lines and deliveries are expected to begin shortly. Price is $25,000.

Foreign sale was three helicopters to Ostermans Aero A. B. of Stockholm, Sweden. Ostermans has also been appointed Bell distributor in Sweden. The Bell machines will be the first commercially-licensed helicopters in Europe.

Six Model 47Bs were sold to helicopter Air Transport, Inc., of Camden, N. J. Filene's, a large Boston department store, bought one for delivery in New England.

Central Aircraft Corp., Yakima, Wash., bought nine Bell helicopters.

to use in a variety of activities. This is the same company that cooperated with Bell the past summer in crop-dusting experiments with a helicopter. Lundberg-Ryan, of Toronto, Canada, has ordered two helicopters for mining survey work. It, too, did some experimental work of this nature prior to ordering.

Other sales were to: Southern Arizona Airlines; Rotor Air Services, San Diego, Cal.; New England Helicopter Service, Providence, R. I. (one each); Armstrong Flint Helicopter Co., Los Angeles; Texas Enterprises, Ft. Worth (two each).

NEEDLE-NOSED SPEED PLANE: *One of the first published pictures of the Bell XS-1 supersonic research plane, this view shows the telemetering antenna which gives it its needle-nosed appearance. Note the retractable tricycle gear, the bullet-shaped fuselage and the knife-thin wings. It is powered by four 1,500-lb. static thrust rocket units made by Reaction Motors of Pompton, N. J. (AAF photo)*

Curtiss-Wright Plans New Cargo Transport

CW-32 is four-engine, high-wing aircraft designed to compete with ground transportation; payload 25,000 lb.—speed 270 mph.

Plans to re-enter the commercial aircraft field with a four-engine cargo plane were announced last week by Curtiss-Wright Corp. at the National Aircraft Show. Curtiss has not produced a commercial plane since its biplane Condor in the middle thirties, although several years ago it contemplated a commercial version of the C-46 military transport.

The projected aircraft, on which four months of engineering work has been done at the Columbus, Ohio, plant of the airplane division, will be designed for a 25,000-lb. payload for a 1,500-mile range. Gross weight will be 80,000 lb. and cruising speed 270 mph. at 25,000 ft. Prototype is expected to be completed early in 1948.

▸**Cyclone Powered** — Designated the CW-32, the cargo plane will be powered by four R-1820 Wright Cyclones developing 1,525 hp. each for takeoff. Engines will have exhaust-driven superchargers, the same installation that was used on the B-17 bomber. Design of the undercarriage was based on the possibility that competition may force utilization of jet power. The gear retracts into the fuselage rather than into the engine nacelle.

C-W is shooting at an operating cost low enough to make the use of the CW-32 competitive with surface transportation. It claims the airplane will operate at a direct cost of "less than five cents per ton mile." The plane has a cargo volume of 4,000 cu. ft. in one compartment that is 59 ft. long, 9 ft. wide and from 7 to 9 ft. high. The floor is truck-bed height—45 in. from the ground.

Loading is accomplished through a nose door, three large doors on the side, or through an exceptionally large opening made by swinging up the fuselage after-end.

A high-wing design, the CW-32 is distinguished by a raised tail surface, similar to that generally used on jet-propelled planes. This unusual position is explained by C-W engineers by a desire to put the tail surfaces in the same relation to the wings as they bear on low-wing aircraft.

The CW-32 will be equipped with Curtiss electric reversible propellers which, in addition to making possible shorter landing runs, will enable the plane to back away from loading docks under its own power and eliminate the necessity for auxiliary ground-handling equipment.

New Cargo Transport Announced by Curtiss-Wright: *Cutaway drawing of CW-32, a turbo-supercharged 4-engined cargo plane being built at the Columbus, O., plant scheduled for completion in early 1948. Designed to carry 25,000 lb. 1,500 miles, or 20,000 lb. 2,500 miles without refueling, CW-32 will weigh 80,000 lb. fully loaded. Maximum cruising speed of 270 mph. is given at 25,000 ft. A high wing design, loading floor level will be 45 in. Feature of plane is hinging of entire tail which opens upward to provide direct end-loading.*

Aircraft Pay Up

"Take home" pay of production workers in aircraft and aircraft parts plants during August averaged $53.68 weekly, 10.4 percent more than during August of last year, according to the Bureau of Labor Statistics.

Weekly "take home" of production workers in aircraft engine plants averaged $56.26, or 19 percent more than during August a year ago.

Aircraft Industry Plans Set Pace For Industrial Preparedness

AAF and Navy BuAer seek $70,000,000 to finance future plans as munitions board chief reveals pilot role for air manufacturers.

The aircraft industry is the guinea pig of the Army's and Navy's industrial preparedness program, it was indicated officially for the first time last week by Richard R. Deupree, chairman of the Army-Navy munitions board. Industrial preparedness planning for the aviation industry is much farther along than for any other industry and will set the pattern for the future, Deupree declared at a forum in Cleveland sponsored by the Air Power League.

Stressing that the preparedness plans will be expensive, he asked manufacturers to back up ANMB and the services in their budget requests. He stated that ANMB already had talked to Republican leaders of Congress who have been announcing plans for cuts in governmental expenditures.

▸**$70,000,000 Asked** — Extent of those budget requests was given by Lt. Gen. Nathan F. Twining, also speaking at the forum. For the fiscal year 1947, Twining said, AAF and the Naval Bureau of Aeronautics combined are requesting $70,000,000 for planning for industrial preparedness. This sum will be disbursed to manufacturers to draw up plans of what it is necessary for them to do to meet the service's aims.

This is the so-called "Phase Two" of the industrial preparedness program, according to J. Carlton Ward, Jr., president of Fairchild Engine & Airplane Corp. and chairman of the Industrial Planning Committee of the Aircraft Industries Association. Phase One is scheduled to end Dec. 1 with the submission to the services by 20 selected manufacturers of reports on studies the manufacturers have been making of contractural procedures, plant layouts and other aspects of preparedness. The planning contracts will be let to companies on the basis of the Phase One reports.

▸**Revise Plans**—The over-all industrial preparedness plan that will result from these contracts will be kept continuously up to date, Deupree asserted. A new plan will be formulated every year if necessary.

"We are trying to draft it so definite that it will not be thrown into the waste basket in time of another emergency," he stated in a reference to what happened to previous plans at the start of World War II.

Rear Admiral Thomas S. Combs, deputy and assistant chief, BuAer, detailed for the first time the Navy's industrial planning set-up. At the base is a planning unit in each bureau of the Navy. Top organization is the industrial planning branch in the procurement division of BuAer. This branch, in cooperation with AAF, has already awarded contracts to selected manufacturers representing a cross-section of the aircraft industry to study their production records and submit ideas of what measures should be taken. Navy is asking for funds for its industrial preparedness program as a separate item in its budget, Adm. Combs said.

Frederick C. Crawford, president of Thompson Products Corp., represented parts manufacturers and subcontractors at the forum and declared that that branch of the industry was in complete accord with the planning proposals outlined by the services.

AVIATION CALENDAR

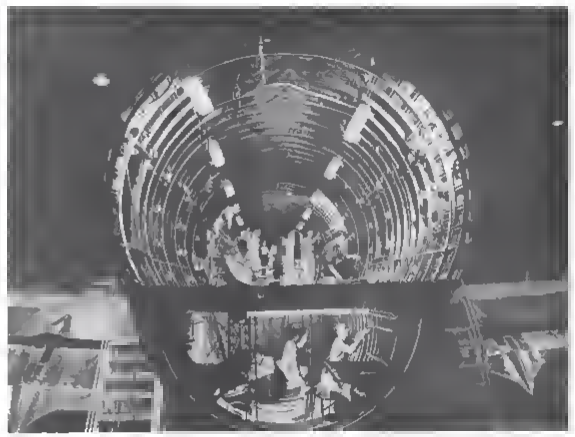
Nov.—International Aeronautic Exhibition, Paris, France.
Dec. 2-4—SAE National Air Transport Engineering Meeting, Edgewater Beach Hotel, Chicago.
Dec. 12-15—International Aviation celebration, El Paso, Texas.
Dec. 17—Anniversary dinner, Washington, D.C. Aero Club, Hotel Statler.
Dec. 17—Wilbur Wright Memorial Lecture—Dr. Theodore Von Karman, Hotel Statler, Washington, D.C.
Jan. 10-11-12—All American Air Maneuvers, Miami, Fla.

Standardized Cockpit Adapted for Trainers

Army, Navy and the British Royal Air Force have decided upon a standard arrangement of instruments and devices in an aircraft cockpit to be adopted by all three services for every single-engine aircraft from trainers up to the fastest fighters.

The standard arrangement puts the throttles on the left, gun switches upper left forward and other devices in positions where intensive study has proved they are handiest. No control is located behind the pilot.

Another innovation is in vary-



STRATOCRUISER UNDER CONSTRUCTION: *Unusual view of a Boeing Stratocruiser under construction at the Seattle plant. Upper deck will carry 80 passengers and is connected with lower deck lounge by spiral staircase. Lower deck will also carry baggage and cargo.*

ing the shape or size of different controls so they can be identified by touch even when the pilot's hands are encased in heavy gloves Association of ideas has also been utilized. The control for the arresting hook on naval carrier-based aircraft is a miniature hook that is placed on the right-hand side of the cockpit in every naval carrier plane

The study of cockpit arrangement was begun a year ago by a joint AAF, Navy and RAF committee. Actual design was done by the special devices division of the Navy's Office of Research under the direction of Rear Admiral Luis De Florez. Charles A. Lindbergh was a consultant on the project.

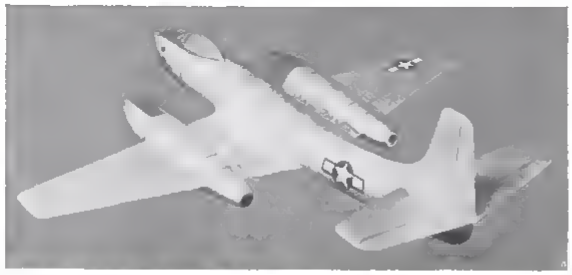
Standard cockpit, which was displayed at the National Aircraft Show, is in the new Navy trainer, XNQ-1, built by Fairchild Engine and Airplane Corp.

Jet War Games

West Coast war games now under way are expected to produce first complete information on the tactical use of American jet fighters.

Lockheed's P-80 is bearing the brunt of tests in low level attack, bombing, and photo reconnaissance. Principal units involved are the 1st Fighter Group, commanded by Col. Gilbert L. Meyers, and the 12th Photo Reconnaissance Group, of FP-80's, commanded by Col. Leon Gray.

The war games are covering the entire Southern California coastal plain, and include nearby islands.



NEW ALL-WEATHER FIGHTER: *Design model of the Curtiss-Wright XP-87, one of the latest AAF all-weather fighters designed for operations under conditions where visual contact is impossible. Powered by two jet engines, the Curtiss fighter will carry heavy forward-firing armament. An attack version of the same plane is being contemplated as the XA-43*

Sikorsky Unveils New Helicopter

A new two-place helicopter with all-metal blades, first ever to be specified as standard equipment, was unveiled at the National Aircraft Show in Cleveland by Sikorsky Aircraft Division of United Aircraft Corp.

Designated the S-52, the latest of Sikorsky's rotorcraft has an unusually high useful load of 650 lb. with a gross weight of 1,750 lb. For a range of 50 mi it is designed to carry a payload of 370 lb., for a range of 250 mi., a payload of 224 lb., and for a range of 310 mi., a payload of 176 lb.

According to B. L. Whelan, general manager of Sikorsky, the S-52 was conceived particularly for military liaison and patrol work, police work, inspection of utility lines, etc. More than one observer at the show commented, however, that in the sleekness of its design it had outstanding eye-appeal for the private owner.

Built in six weeks and rushed to completion a few days before the show opened, the S-52 has not yet been flown. Plan, after the show closes, is to completely strain gauge it and run the 100-hr. CAA test with the ship tied down. Then it will be test flown. Meanwhile six similar craft are under construction.

Powered by a Franklin engine of 178 hp., the S-52 is designed to cruise at 90 mph. on 75 percent power, with a high speed at sea level of 105 mph. Service ceiling is 16,000 ft. although the hovering ceiling ranges from 6,000 ft. to 9,100 ft.

New Model S-52 Sikorsky: *Introduced for the first time at the Cleveland National Aircraft Show, the two-place Sikorsky S-52 helicopter is designed to cruise at 85 to 90 mph with top speed of more than 100 mph., and has 650 lb. useful load. Photos show all-metal rotor blades, easy access to cockpit, luxurious cockpit fittings, and compact instrument pedestal and controls*

* *

Beech Bonanza Certificated; Fast Deliveries in December

Trend toward family-sized plane is paced by new four-place aircraft designed for comfortable cruising; production to rise fast in 1947.

By ALEXANDER McSURELY

Certification, last week by CAA, of the Beech Bonanza Model 35 should prove a timely stimulant to the personal aircraft industry, since the new Beech four-place plane, in this writer's opinion, hits a new high in the multi-place personal plane field.

Deliveries are expected to commence from production tooling, about Dec. 10, with the rate of delivery accelerating rapidly during the first quarter of 1947, John P. Gaty, vice-president and general manager, Beech Aircraft Corp., Wichita, announced.

▸**New Trend**—A new trend in personal aircraft, away from the small planes, to the family-sized aircraft, long predicated by many personal plane market analysts, appears to be due next year unless general economic conditions interfere.

Significant indicator of this trend, is the number of manufacturers who have four-place planes now on the market—North American, Stinson Division of Consolidated-Vultee, Republic, Bellanca, and Fairchild. Following close behind are many other companies who are pushing experimental four-place planes toward quantity production, including Piper, Erco, Aeronca, Waco, Luscombe, Taylorcraft, Globe, and a number of others.

The new Beech is the fastest of the four-place planes now flying, and yet one of the slowest and easiest to land. It is credited with a 175 mph. cruising speed at 10,000 ft. (at 115 hp.) and a 185 mph. top speed at sea level. Yet it's stalling speed with flaps is only 46 mph. and it will land in 315 ft. at sea level, with 10 mph. wind.

▸**Completely Equipped**—One of the highest priced four-place planes, the Bonanza comes completely equipped including complete set of flight instruments, radio receiver, transmitter, marker beacon receiver, homing loop, automatic antenna reel, cabin heater and ventilator system, with windshield deicers, soundproofing, continuously variable controllable pitch propeller, and lights. It will carry four 170-lb. persons, and 100 lb. of baggage with full fuel load and is credited with a 750-mile range, at 165 mph. at 10,000 ft.

There are many other factors that contribute toward making the Bonanza probably the best all-round plane now being offered in personal air transportation.

During a recent visit to Beech at Wichita, we found the plane easier to enter than any we know, by means of a little step, which folds up when the wheels retract, a stride up the wingwalk and through a wide door, into a roomy cabin (42 in. wide, 6 ft. 11 in. long, 4 ft. 2 in. high, with 36 in. by 37 in. door).

Once inside, it's quiet! Soundproofing the cabin has been done excellently and the Beech-built propeller is a wide-bladed affair which turned comparatively slowly by the six-cylinder Continental E-165 which only turns up to 2,050 rpm. to deliver its full rated 165 hp.

▸**Cabin Comfortable**—Cabin fittings indicate a conscientious effort has been made to anticipate desires of the occupants of a plane which on occasion might fly four hours nonstop. Among other things there are four ashtrays, four adjustable sunshades, a custom-built push-button Motorola radio with three-band reception and an overhead speaker mounted half-way between front and back seats. The throw-over wheel control has two positions on either side, so that pilots may relax by changing positions in long flights.

The plane handles easily in flight, has excellent stability and makes perfect aileron turns without use of rudders. As far as we could tell the Bonanza's butterfly tail made no difference whatever in the feel or use of the controls from that on any plane with conventional empennage. It is probable that the average Ercoupe pilot could fly a Bonanza without

Mating Bonanza Fuselage: *An ingenious "mating" jig is used by Beech Aircraft Corp. in assembling the fuselage of the four-place Bonanza Model 35, certificated last week by CAA. Center, nose and rear fuselage sections are assembled separately in smaller jigs, and moved to the final jig on dollies. After the three sub-assemblies have been joined, the fuselage is hoisted from the jig to take its place on the assembly line. Tooling such as this is expensive, but labor-saving, will give aircraft companies, who can make the initial investment, a considerable edge over competitors, who connot, in the fiercely competitive personal and executive plane market.*

difficulty as soon as he had learned the added requirements of operating the rontrollable propeller, flaps and retractable landing gear. However the Beech plane does have rudder pedals for use in cross-wind landings, but will land or takeoff under ordinary conditions with wheel only.

In taxiing the plane handles well due to a tricycle gear with wide tread and long wheelbase, air-oil Beech-designed shock absorbers, and rebound control. Visibility is very good in the air and on the ground.

Solid Structure — Structurally, the all-metal Bonanza has a solid metal cabin top with deep box sections running up on either side of the windshield to the top. Other box sections provide additional "beef" and protection in the roof structure. Flush-riveting has been used extensively in exterior construction for a cleaner, faster airplane with 85 percent of all exterior rivets being flush. The monocoque fuselage and full cantilever wing are structurally similar to those of the twin-engine Beech Model 18.

Windshield and windows are ultra-violet proof Lucite. The soundproofing insulation, which also serves as a heat insulation, includes a primary sound deadener roating and two blankets of Fiberglas separated by a Fiberglas insulating board. All-wool, flameproof, lightweight aircraft fabric is used in the upholstery.

The company estimates that total cost of operation per hour, at 150 mph. on a basis of 200 hours a year, would be $14.20 or $3.55 per passenger when owner-operated. This takes into account fuel, depreciation, maintenance including storage, and insurance. Operating cost per mile for 200 hours a year is estimated at 9.5 cents, and per passenger mile at 2.4 cents. The cost figures drop sharply for use above 200 hours a year.

Higher Performance Is Quoted for Chum

Revised performance figures announced last week for the new, simplified-control, two-place, all-metal Aeronca Chum show the plane to have a top speed of 118 mph and cruising speed of 108 mph instead of 115 and 105 as the manufacturer previously announced.

The Chum has a 42-in. wide cabin, entered by wide auto-type doors on both sides. It is designed with special attention to passenger convenience and comfort, with thick Airfoam cushions, new full-view safety control wheels, glove compartments, ash trays, pockets for maps or other articles, and is completely soundproofed. An adjustable airscoop in the roof, ventilators forward of the doors, and a draftless ventilator in the door are provided, along with a cabin heater. A centralized instrument panel, easily visible from either seat, accommodates airspeed indicator, altimeter, compass, tachometer, oil temperature, pressure, and fuel gages with provision for two-way radio, in addition to extra instruments.

Using a two-control system licensed to Aeronca Aircraft Corp. by Engineering & Research Corp. under the basic Weick patents for the control system used on the Ercoupe, the Chum is likewise designed to be spinproof, and to be included under the CAA licensing arrangements for pilots of spinproof planes.

Structurally, the Chum represents a departure from Aeronca's previous products which have been principally fabric-covered planes of welded steel tubing construction. However, moving conveyor assembly line operation has been used successfully by the Middletown, Ohio, manufacturer, for quantity production of its first two postwar models the Champion and the Chief. Aeronca led all other personal plane manufacturers in the number of planes delivered, for September.

In producing the new Chum, Aeronca again will use conveyor assembly line methods, and will stamp out many of the parts of the all-metal fuselage and wings, for greater efficiency, John W. Friedlander, Aeronca president, has announced. Production is expected to start on an assembly line basis, early in 1947.

Other specifications and performance data for the Chum:

Range of 400 miles with 22 gallons of fuel, rate of climb, 610 ft/min.; landing speed, 49 mph.; service ceiling, 11,000 ft.; baggage allowance, 60 lb.; wingspan, 28 ft. 8 in.; length, 20 ft.; power plant, 85 hp. Continental engine with fuel injection; gross weight, 1400 lb.; weight empty, 880 lb.

Aeronca's Two-place Chum: *Centralized arrangement of instruments on panel and new safety-type control wheels are attractive interior appointments of new simplified-control Aeronca Chum. First all-metal Aeronca plane, the Chum has fixed tricycle landing gear with unusually wide tread, giving good ground-handling characteristics. Power plant is Continental engine with fuel injection.*

All-Metal Shift Evident at Show

Transition of personal-plane manufacturing from the fabric-covered steel-tubing airplane to all-metal construction is making rapid strides, hastened perhaps by the rapid decline in sales of minimum price training airplanes during recent weeks.

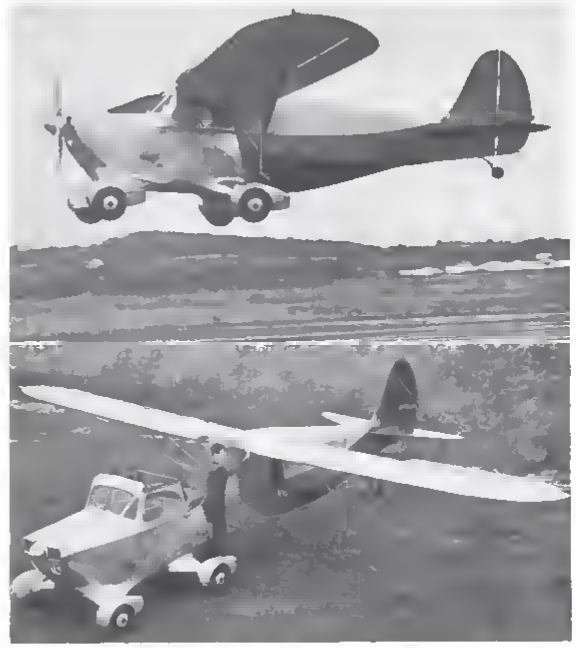
With few exceptions, the major lightplane companies have all-metal (or all-metal except fabric wing-covering) airplanes in prototype flight stage, well along in development, or in production.

Displays at the National Aircraft show exhibited all-metal planes built by Aeronca, Beech, Cessna, Ercoupe, Luscombe, North American, and Republic. Piper, one of the other two exhibitors, has an all-metal four-place prototype Skysedan in flight test stage, and Consolidated-Vultee, whose Stinson Voyager 150 was on display, also has a number of all-metal construction prototypes in various development stages in addition to the all-metal army liaison L-13.

In addition to planes of this group of exhibitors, the two-place Globe Swift, the new experimental Fairchild four-place plane, the experimental two-place Taylorcraft, the two-place All-American Ensign, the four-place Wheelaire, the four-place Kaiser-Hammond Aircar and the four-place Spartan Executive are other planes basically of all-metal construction, either in production or in development.

While several of the two-place planes listed have fabric-covered over metal wing structures, a trend to replace this with simplified wing structure and all-metal stressed skin has been started by Globe and Luscombe, is being followed by Aeronca on the simplified-control Chum, and may bring some of the other companies into "completely-all-metal" construction (as Luscombe calls it) soon, because of the sales argument advantage of the all-metal wing, if nothing else.

Condition of the industry as a whole, as to this transition in construction, appears to warrant a conservative prediction that more than 50 percent of the personal planes sold next year will be all-metal (or all-metal except wing-cover) and that in 1948 only a small fraction of total lightplane production will be in fabric-steel-tube planes.



CAR INTO PLANE: *Robert E. Fulton, Jr., descendant of steamboat inventor, and chief designer of "Airphibian" built by Continental, Inc., shown (right) at controls of his auto-aircraft. Road-tested for 4,000 miles, Airphibian which made successful flight test at Danbury, Conn., Nov. 7 (top), is two-seated, single-engined model cruising at 125 mph, landing at 55 mph. Equipped with 3-bladed wooden prop, Airphibian is converted from plane to car in 7 min.* (AVIATION NEWS, Nov. 18, 1946).

Aircraft Title Searching Will be Done by Landreau

Aircraft title search and guaranty will be provided by Norman B. Landreau, and his recently organized Aircraft Title and Guaranty Corp., 928 Shoreham Bldg., Washington, he announced last week. Landreau, a World War I flyer, and a manufacturers' representative in Washington, during recent years, expects such a service will be increasingly necessary for finance companies, dealers, airplane manufacturers, etc. since CAA has advised it will no longer be able to furnish information concerning ownership, chain of title, liens recorded, etc. to the public.

Landreau plans to provide replies to telephone or telegraph requests for title information within 48 hours, at a maximum, and thus far has provided it in an average of less than 24 hours.

His service will include providing certified or photostat copies of documents required to show

EASY LANDINGS:

New landing aid instrument developed by Earl Flint, Middletown, Ohio, uses wartime bombsight principle in reverse. Instrument has demonstrated ability to land plane from altitudes up to 500 ft. Pilot sets dials for correct glide speed, wind velocity, and load, and watches approach through glass optical system. When a projected dot, on glass, reaches landing point, he cuts motor and completes approach, landing within plane's length of chosen spot. American Gage & Manufacturing Co., Dayton, will manufacture 5-lb. instrument for lightplanes. Device is also applicable to commercial airliners, Flint says.

ownership, liens, mortgages and titles, in such form as to be admissible as evidence in court.

A schedule of fees includes: $15 for title search and report on last registered owner of an aircraft, $5 for prompt registration of aircraft or handling of liens, in addition to government reordation fee of $5; photostat, notarized or certified copies, $2 per page.

Million Miles Flown By Plane Delivering Pilots

American Flyaway Service, Dayton, Ohio, recently completed its millionth mile of new personal plane delivery flying in a trip which Leon Wilder, president, made in delivering an Ercoupe from Riverdale, Md., to Oliver L. Parks, president, Parks Aircraft Sales & Service, East St. Louis, Ill. Howard Cleveland, vice-president and Washington manager of the service, reports that the service, which now uses approximately 35 pilots, has flown deliveries of approximately 2500 new planes since starting operations February.

Briefing *For Private Flying*

FLORIDA TOUR OPENS JAN. 2—Arrangements are being completed for the sixth annual private flyers' air tour to Florida, Jan. 2-26, Al Williams, Gulf Oil Company aviation manager, announced last week. Free fuel and oil will be provided to registered planes at more than 50 specified airports on the four "Gulf Airways" converging at Orlando, Fla., and branching out again to East and West Coast Florida resorts. Entry blanks may be obtained by flyers of planes of 125 hp. or less, at their local Gulf airport dealers. With the upswing in private flying during the past year, the 1947 tour is expected to be the largest in history, unless the weather bogy, which curtailed attendance last year, again interferes.

DIFFENDALL AIRPARK—A new private flyers' field, Diffendall Airpark, has been opened near Baltimore, with unusually good facilities, for flyers and their planes. Operated by Charles and Isabelle Diffendall, the field has been granted a Class I license by the Maryland aviation commission. Facilities include attractive administration building with office space, lounge, restrooms, telephone service, sun deck, shop, hangar, eight tee hangars, fuel tanks and windsock. Two turf runways 1800 and 2200 ft. long both can be extended, and the field can readily be developed into a Class 2 airport if the owners desire. Construction of a seaplane ramp and hangar, along the river on which the property fronted is contemplated at a later time.

INSIDE ST. LOUIS—Ross Airport, at 7700 North Broadway, is the only airport within the St. Louis city limits, and within one block of two major transit routes. Runways of 2850 and 3090 ft. are provided, along with service facilities for all private and executive-type planes. W. W. Ross, president, has announced. A series of improvements augmenting present facilities is planned.

DISQUALIFICATION REASONS—The explanations for disqualifying some of the airports checked by NAA representatives in the first judging for good operating and safety practices, are perhaps even more important than the fact that 17 airports in Northeastern states have already been designated for certificates of food operations and service. Jerome Lederer, vice-president of NAA, in charge of air safety, listed among reasons for disqualification: Four airports were rejected because they could not be identified from the air. Five had no markings to indicate temporarily closed fields. Three failed to check fuel for presence of water. One seaplane base was not clear of floating logs. One airport had no air traffic rules. Another had an unmarked soft area. One airport where flight instruction was given, had set aside no area for acrobatic flying. Additional airport certificates are to be awarded as soon as inspections can be completed.

MORE ON AIRPHIBIAN—Additional data obtained concerning the Fulton Airphibian, roadable plane recently flown at Danbury, Conn., by its inventor Robert Fulton, Jr., discloses: The car portion of the vehicle has a sheet metal auto body, complete with four wheels, brakes, head and taillights, rear bumper, fore and aft license plates, windshield wiper, sectional radio antennae, rear view mirror, side-by-side seating for two, with safety belts, horn operated by a pedal, almost standard automobile pedal system, standard aircraft control wheel, which also steers car; six-cylinder engine and three-blade propeller, both of Fulton's design. Method of power transmission to drive wheels, and of connecting controls to ailerons and tail have not been disclosed. The Airphibian's aircraft component is of fabric-covered metal ronstruction, and rests on three small dolly wheels when not in use. Fuel consumption of 25 miles to the gallon is reported for the vehicle, on the ground, while as an airplane, it consumes about 8 gallons an hour, while cruising at "somewhere between 100 and 150 mph." Landing speed is approximately 55 mph. The plane has been under development for the last year at Danbury airport, with the efforts of 10 individuals going into the design. Inventor Fulton who was with Flight Training Research in Washington, during the war, is credited with a major part of the work on the highly successful Gunairstructor, used for simulating combat, to train aerial gunners. —Alexander McSurely

Cleveland Show Provided Major Stock-Taking Opportunity

Side-by-side comparisons of products benefited manufacturers, and dealers discovered they are a prime part of industry; greatest exposition acts as morale-booster.

In addition to being probably the greatest industrial exposition ever held, the National Aircraft Show last week furnished the aviation industry and its suppliers with a stock-taking opportunity of major importance in itself.

Sales resulting directly and indirectly from the show—which still could not be estimated late last week—were only part of the picture and, possibly, a very small part. In the opinion of some observers the show served a more useful purpose in permitting manufacturers themselves to make what amounted to side-by-side comparisons between their products and those of their competitors.

An offshoot of this in the case of lightplane manufacturers, particularly, was the opportunity to compare the public appeal of competing products.

Taking stock in another sense, more than one person in the industry found the tremendous and many-faceted displays comforting. Sensitive of the financial difficulties of some companies, and seeking a reply to the more and more frequent assertion that the industry is slipping rapidly into an economic morass, they presented the show as an answer. Also heard was the contrary view that the industry was in no position to support an exhibition of such size and scope.

The two apparently conflicting views found a middle ground of agreement, the show was a morale-booster of outstanding importance. It was pointed out that many distributors and dealers are either new to aviation, or were practically inactive during the war. Since the end of the war, manufacturers have been reestablishing and overhauling their distributor set-ups, but liaison is still spotty. C. J. Reese, president of Continental Motors Corp., said one of the greatest benefits of the show is to implant firmly in the minds of distributors and dealers the knowledge that they are a prime part of a great industry.

With top representatives of all but one or two of the aircraft companies at the show, Cleveland last week was a forum on the state of the industry's health. Instead of gloom or forebodings about the future, there was a realistic appraisal of prospects. There was no blinking at the fact that lightplane sales have slumped, nor that orders for transports are bound to be cut. While few pretended to have predicted a year ago what is now happening, analyses and explanations of the present situation were ready.

As far as lightplane sales are concerned, manufacturers' views cover three factors. One, this is a seasonal slump occasioned by the fact that winter is a poor flying season in most of the country. The second reason is linked to the first. About 90 percent of lightplane sales in the past six months have been of trainers to meet the demands of the veterans' training program. Now some of that training activity has to be curtailed because of the season.

The third factor is that the production cutbacks of some companies and the financial problems of others is only what might have been expected. During the war, quite a few groups laid plans to enter the peacetime aircraft business although estimates as to the extent of the market were based on hope as much as on statistics. These groups knew or should have known they were taking a chance, it is emphasized. What is occurring now is a normal shaking down that can be found in any industry that is groping for its true place in the nation's economy. That analysis was perhaps the most common one at the show.

The market prospects of transport plane manufacturers were viewed in a different light. Here, the stress was all on the condition

CULVER WINGTANK: *Installation of the Goodyear pliocel (nylon and rubber) fuel tank in the leading edge of the Culver Model V wing, at the Wichita plant, is shown. The flexible material used makes possible the handy leading edge installation, without damage to the tank from wing deflection, and insures a minimum change in trim at varying fuel loads.*

BLADES FOR BELL:
Rotor blades for Bell Aircraft Model 47-B two-place helicopter awaiting finishing touches at the Niagara Falls plant. These main blades are manufactured from hundreds of pieces of carefully selected woods, laminated and processed to serve as a unit. A metal reinforcing bar runs through the center of each blade (Martin & Kelman photo)

of the airlines, and manufacturing representatives at the show indulged to the limit their talent for worrying

In the how-are-we-doing sessions that were an inevitable by-product of the show, production men generally agreed that worker efficiency—one of the most troublesome factors since the patriotic spur evaporated—is rapidly on the up-grade. Major reason is the various incentive plans, most based on time studies and resulting, in effect, in overtime pay for a normal working day. While a widespread poll could not be taken, queries of half-dozen or so manufacturers having unionized plants indicated no union reluctance to the incentive plans

Overall impression gained from manufacturers is that the industry's labor relations are satisfactory. There are spotty situations and more manufacturers than might have been expected reported they have open shops. There is some concern that if U.A.W.-C.I.O. wage demands in the automotive industry result in strikes, lack of parts or accessories might hemper production, but most companies operating at a high rate report adequate inventories to carry them for a while.

The materials situation seems to have improved considerably in the past few months. The fabric supply for the most part is satisfactory. Fragmentary indications are that the aluminum shortage is easing materially. Stainless steel is not going to the parts and fittings plants in anywhere near the volume that could be used, but the majority of the users seem to be keeping a little ahead of actual consumption

Orders for Gemini

Britain's Miles Aircraft reports orders totaling more than $2,000,000 for its Gemini, twin-engine light transport. Involved are about 100 aircraft and spares, for all parts of the world.

The Gemini, a twin-engine version of the Magister trainer, was designed especially for charter work and was test flown about a year ago. Production is now proceeding at the company's plant at Reading.

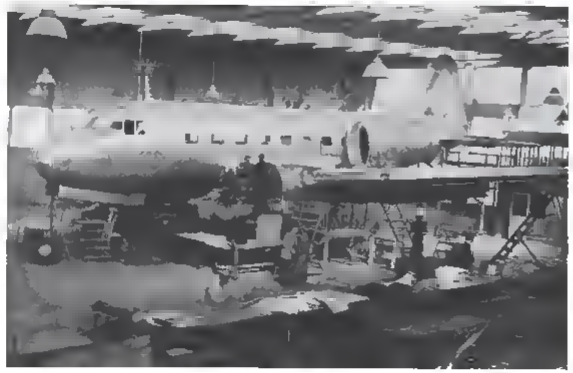
Nuffield Plans 100 hp. Engine at $430 Price

British aviation manufacturers are watching with interest the plan recently announced by the Nuffield Organization to build a light airplane engine, of approximately 100 hp., which would sell for about $430.

While such a price is far below usual standards, even in the U. S., the proposal is not being brushed off by British manufacturers because Nuffield is one of the largest motorcar manufacturers in the world and has an engineering and production record that commands respect.

Lord Nuffield, Sir William Morris, started his automobile company on a shoestring and built it into a major industrial establishment of the entire British empire. His whole record is one of confounding skeptics.

Concurrent with the Nuffield announcement is a report that another manufacturer is designing a lightplane around the projected Nuffield engine



SCANDIA NEARS COMPLETION:
Final assembly was being undertaken on the prototype of the SAAB Scandia 24-32 transport when this photo was taken. Tentatively, the plane was scheduled to be given its test flight this month, with series production to start in mid-1947. (McGraw-Hill World News photo.)

Tropical Engine

Rolls-Royce, British engine manufacturer, has developed a special tropical power plant installation with radiators in the wings which has been tested on both ground and in the air at an air temperature of 106 degrees F. Maximum permissible temperature of the coolant used is 125 degrees C, with an emergency rating of 135 degrees C.

During the tests, undertaken at Baghdad, Iraq, the plane was taxued for 45 min with the engine running at 1,200 rpm. At the start the coolant temperature was 69 degrees C. and was still within the safety margin at teke-off. One minute after take-off, the coolant was down to 113 degrees C, and dropped to 101 when the aircraft attained 12 000 ft.

Profit-Sharing Plan

Sales employees of the Southwest Airmotive Company will participate in a profit-sharing plan, with the first share to be distributed May 31, George W. Jalonick III, vice-president, has announced. Twenty percent of operating profits will be set aside for the purpose and individual shares will be based on annual wage and longevity. To participate, employees must be with the company seventeen consecutive months.

Need 18,000 Workers

Poll of 64 aircraft plants by the United States Employment Service show a need by next month of 18,000 additional workers, the largest number being in demand in California, 5,800. Connecticut reports a need of 4,500, Texas, 3,550, and New York, 1,330.

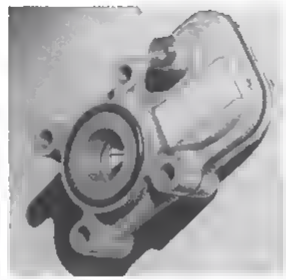
Principal shortages, according to USES, are in patternmakers, die finishers, tool and die makers, and sheet metal workers. Also in demand are assembly machine operators, airplane mechanics, riveters, maintenanre carpenters, template makers, experimental jig builders and air painters.

While it is too early to astimate the peacetime level of employment in the industry, figures compiled by USES do show that employment is still rising after the postwar low, experienced in March of this year.

High Speed Snow Removal

Collecting and casting snow at the rate of 25 mph in 6 in. of snow and 1 in. of ice crust, the new Bros Sno-Flyr high speed rotary plow is designed to reduce to the minimum the high investment in the number of trucks, blade plows, and labor currently used on many airports.

Produced by the Wm. Bros Boiler & Mfg. Co., Minneapolis, Minn., the Sno-Flyr has a specially designed feeding rake which permits the rotary to work in snow from 2 in. to 12 ft. deep. The gathering wings and safety shear pins attached to the 8 ft. plow frame allow an over-all cutting width of 14 ft. The wings collect the snow to within ½ in. of the runway surface and force it into the double rotary wheels. The heavy duty rotary blades pulverize the snow and ice into a consistency permitting it to be cast 150 ft. to either the right or left of the runway.



easy operation is assured with straight-through, unimpeded flow when open, and clean-cut, drop-tight sealing when shut.

Made in a wide variety of types, sizes and pressure ratings to meet the requirements of all aircraft installations, Whittaker Slide Valves are being installed in the Convair 240, Douglas DC-6, Boeing Stratocruiser, Lockheed Constellation, and many other civil and military types.

New Aircraft Shut-off Valve

Manufacture of new CAA-approved fire resistant sliding gate shut-off valves for use in civil and military aircraft has been announced by the Wm. R. Whittaker Co., Los Angeles, Calif.

Consisting basically of two ported metal face plates between which operates a metal slide, they are reported to be ideal for engine oil, water, air or vacuum lines and are readily adaptable to remote control systems. With no metal-to-metel contact between the moving and stationary parts, free and

Telex Monoset

A new electro-acoustic device, suitable for commercial aircraft pilots and flight control operators in radiotelephony, has been made by Telex, Inc., Minneapolis, Minn. Called the Telex Monoset, the entire unit, including speaker and miniature plug-in cord attachment, weighs only 1 2 oz., thus reducing ear pressure and head fatigue.

★ ★

CAB Show Cause Orders Hit 7 More Uncertificated Lines

Board sees Civil Aeronautics Act violations by carriers operating on New York-Miami-Caribbean route; other investigations underway.

By CHARLES L. ADAMS

Issuance of seven more show cause orders to "nonscheduled" and contract airlines has brought to 12 the number of uncertificated companies cited by CAB within less than a month for allegedly operating scheduled common carrier servire in violation of the Civil Aeronautics Act.

All of the latest orders are directed against carriers on the New York - Miami - Caribbean route, which probably has generated more passenger traffic for nonscheduled companies than any other link, including the transcontinental run. While the seven lines cited fly both passengers and cargo, it is believed the Board instituted action against them almost entirely because of their passenger-carrying operations.

▸ **Willis Largest**—Willis Air Service, New York, operating five C-47s and two C-54s, is the largest company named in the Board's latest batch of show cause orders. Others are Intercontinental Air Transport Co., Miami, Trans-Tropic Airlines, Miami, Air Freight, Inc., Newark, N. J., Universal Airlines, Inc., Miami, Skyline, Inc., Coral Gables, Fla., and Union Southern Airlines (formerly International Air Lines), New York.

The seven carriers will be permitted to use CAB's new abbreviated administrative proredure in settling their differences with the Board (AVIATION NEWS, Nov. 11). Under this arrangement, a CAB attorney would meet with company officials and attempt to work out a plan for adjustment of each carrier's operations to meet all requirements of the Civil Aeronautics Act, including the nonscheduled exemption.

▸ **Interest in Short-Cut**—Interest in the procedure, which shortcuts the lengthy process of prehearing, preparation of exhibits, formal hearing, examiner's report, briefs and oral argument, has already been expressed by the five unrertificated airlines cited by CAB last month. Meanwhile, it is understood that Board investigations of other uncertificated lines are now underway.

New Pickup Rig Developed at Dayton

A small, lightweight air pickup device said to be adapteble to virtually any aircraft large enough to accommodate pilot, pickup operator and minimum cargo stowage space has been developed by International Air Pick-up Systems, Inc., Dayton, Ohio.

Additional advantages claimed over other pickup equipment are ease of installation, simplicity of operation, and the fact that the pickup plane requires little or no modification. Already used by the AAF the device has been thoroughly tested. The manufacturer sees a place for it in feederline operation.

Major difference from the usual pickup method, such as that used by All American Aviation in its certificated operation, lies in the manner of accelerating the load to the speed of the plane. Elasticity of the pickup cable is a cushion in both instances, but instead of a brake mechanism on a winch to slow the pay-out of the cable while the pickup is being made, International employs a steel stake to retard the pickup shock.

This means that the cargo container, when the grapple hook from the plane engages the loop on the ground station, first is catapulted into the air at approximately half the speed of the aircraft. As it reaches a stop on the transfer line, the end of the line slides off the ground anchor stake and the load again accelerates, this time to the full speed of the plane. The nylon cable stretches and recovers twice in the process.

If the load is light, it can be hauled into the plane by hand, the hook leader merely being tied to any strong member of the plane's structure. If heavy, or several pickups are being made, a small electric winch is provided (30 lb. in weight with a maximum lifting capacity of 400 lb.) for attachment to the overhead structure of the airframe.

GROUND HEATER: *To protect perishables from severe winter temperatures, Slick Airways has developed a heating system consisting of three thermostatically controlled heaters in its C-46 airfreighters, plus ground heaters which pour a regulated stream of heat into cargo compartments on stopovers. Picture shows 250,000 BTU per hour ground heater in action. Connected with plane's ducts in belly compartment, heater keeps fruits, vegetables, flowers or other perishables at proper temperatures during loading, off-loading or refueling.*

Base at K. C.

National Skyway Freight Corp. has closed its facilities at Omaha and Oklahoma City and moved them to Kansas City, Mo., making that point a principal crew change and gasoline base for the Flying Tigers.

Air Freighters Press For Cargo Routes

Slick cuts October loss ro $12,106 as CAB opens hearings on freighr case at Fort Worth.

With Air Transport Association and twelve airlines in opposition, the Nation's largest nonscheduled and contract rargo carriers pressed for certification at CAB's airfreight hearing last week in Fort Worth, Tex.

Thirteen active uncertificated carriers remained in tbe case, along with Pennsylvania-Central Airlines and Mutual Aviation, as the proreeding opened before Board examiners Wilham F Cusick and R. Vernon Radcliffe. Missing were all of the half dozen surface trucking companies and van lines which filed airfreight applications as early as 1943.

▸**Same Firms Absent**—Also absent were several once-active airfreight firms that filed route applicatious early this year but bave gone out of business or lack funds to prosecute thair rases.

Some applicants still in the proceeding were in precarious financial position, and there was speculation on bow many will be operating when CAB decides the case.

Early sessions of the hearing found representatives of intervening Texas and California Chambers of Commerce on tbe stand backing establishment of all-cargo routes Testimony by Airnews, Inc., and Slick Airways followed. Earl F. Slick, president of the San Antonio carrier, buttressed his testimony with a new exhibit showing his company is close to profitable operations. October profit and loss statement reported $255,365 revenue (12 56 cents a ton-mile), $267,471 expense (13.15 cents a ton mile) and an operating loss of $12,106.

Before the Board is the question wbether public interest requires a nationwide system of all-cargo routes operated on a scheduled, common carrier basis to supplement service offered by presently-certificated, passenger-carrying airlines. All-cargo certificates, most of the applicants contend, should be granted companies which have risked millions in pioneering a new industry that existing carriers had neglected.

▸**Airlines' Rebuttal**—The airlines assert that cargo can be carried more efficiently and cheaply in conjunction with passenger service. They insist the uncertificated lines were not pioneers but opportunists who captured the bulk of the airfreight business at a time of equipment shortage and unsettled conditions.

Active airfreight carriers slated to present their case either at Fort Worth or at Washington beginning Dec. 2 include, besides Slick and Airnews: American Air Express Corp., Lone Star Air Cargo Lines, Flamingo Air Service, National Skyway Freight Corp., Willis Air Service, U. S. Airlines, Standard Air Lines, California Eastern Airways, Airborne Cargo Lines, Air Cargo Transport Corp., and Air Travel.

Other industry developments:

▸**Glenn L. Martin Co.** has booked orders from five airfreight companies for 52 Model 202 cargoplanes. **National Skyway Freight Corp.** has ordered 20; **U. S. Airlines**, 10; **Mutual Aviation**, 12; **Airborne Cargo Lines**, 4; and **Willis Air Service**, 6. Final purchase of the craft is believed dependent in each case on the carrier's certification by CAB in the airfreight proceeding.

▸**Pacific Overseas Airlines Corp.**, Ontario, Cal., has petitioned CAB for an exemption authorizing scheduled transportation between Los Angeles and Honolulu until inauguration of San Francisco-Honolulu service by United Air Lines and inauguration by a second carrier (yet to be determined by the Board) of service between Los Angeles and Honolulu. Pan American Airways is the only certificated airline now operating from the West Coast to Hawaii and reportedly is booked solid through Jan. 15. Pacific Overseas owns three DC-4s which can be used on the Honolulu run and has leased a fourth DC-4 that will be available shortly.

▸**National Air Cargo Corp.**, Los Angeles, reportedly has suspended operations following a creditors' meeting. The carrier's four C-47s are to be sold. Stanley J. Jackson, president, plans to organize a new company at Ontario, Cal., which will take over contracts held by NACC.

▸**Rapid Air Freight**, Los Angeles, has started a nationwide air cargo service out of Lockheed Air Terminal, Burbank. The new million dollar contract carrier is using DC-3s but hopes to add DC-4s later. Officers include Maurice F. Roche, president; Orvei R. Buckman, executive vice-president, and Henry P. Rosen, secertary-treasurer.

▸**Waterman Airlines**, Mobile, has purchased a second DC-4 for nonscheduled operations and is planning flights to Rio de Janeiro and the Far East. Company also uses three DC-3s in its Alabama intrastate service.

▸**Veterans Air Express Co.**, Newark, may undergo reorganization and refinancing that will lead to merger with smaller companies shortly. Company's two DC-4s are being modified on the West Coast, and 40 removable seats will be installed in each. VAE after reorganization may abandon domestic service and operate only overseas.

▸**Matson Aviation Maintenance Co.** has been formed at Oakland Municipal Airport to take over the conversion and repair activities of Matson Navigation Co.'s Air Transport Division.

▸**Trans-Asiatic Airlines, Inc.**, Manila, plans to extend its present route between Manila, Hong Kong and Bangkok to Singapore, Rangoon and Calcutta, according to William D. Davis, president. The company, owned largely by American war veterans, operates one C-47 but intends to acquire two more shortly.

▸**Trans-Luxury Airlines**, New York, plans to move its main office and maintenance shops to Oakland Cal.

Flying Horses

American Air Express Corp., which augments its transcontinental cargo service by specializing in the transport of race borses, now claims both the longest and the largest air shipment of that type.

The distance record was set rerently when a suitahly equipped DC-3 lended at Newark Airport with three horses from Argentina, 52 hrs. and 6,250 air miles from Buenos Aires. Other similar fligbts will follow.

The carrier claimed the largest mass movement of race horses by air two months ago when three DC-3s flew 12 of the animals from Saratoga to Los Angeles. At that time (AVIATION NEWS, Sept. 8), American Air Express had carried 38 horses.

Willis' C-54 Airfreighter: *Plans for operating 12 of these four-engine cargo planes in scheduled service have been drawn by Willis Air Service, New York, which is making its bid for a CAB certificate in the Board's airfreight case. The carrier now has five C-47s and two C-54s. For certificated operations, the Commander Line would retire the C-47s; keep ten C-54s in active service; and hold two C-54s in reserve. Willis is among 7 more nonscheds cited in CAB show cause orders.*

* *

Many Aircraft Shares Selling Below Companies' Net Assets

Recent market decline developed marked disparity in relationship between net working capital position and selling prices of manufacturers' stock.

Significant relationships have developed in the net working capital positions and market prices of the aircraft industry. During the past year it has not been unusual for an aircraft stock to sell below its net current assets. In the recent market decline, however, the disparity of this relationship has become particularly marked.

The accompanying table reveals the spread between current market prices and estimated working capital positions of virtually every aircraft company. The working capital positions shown are as of the 1945 year-end. While most of the companies have reported deficits thus far this year, it is considered unlikely that the working capital positions have been impaired to any appreciable extent.

▸**Tax Carry Back**—In the first place, depreciation and similar charges do not represent any rash outlays and may be found to compensate in offsetting stated losses. Further, tax rarry back credits will continue to be effective during 1946 and prove a potent influence in many an aircraft statement.

A substantial number of aircraft companies can be purchased—theoretically—in the market place at less than half of the value of their net current assets. This, of course, does not take into account the added equity to be found in the other assets available and represented by plants and other fixed asset investments.

The companies that currently ran be theoretically acquired on this basis are Beech, Bell, Boeing, Convair, Lockheed, Curtiss-Wright and United Aircraft. On a lesser scale, and available at a price equal to or slightly higher than working capital values are: Cessna, Douglas, Fairchild Engine end Aircraft, Grumman, Martin, North American, Republic and Ryan.

▸**Aeronca, Piper Differ**—It is noteworthy that companies like Aeronca and Piper are not anywhere near the same category of the rest of the aircraft industry in respect to "bargain" market prices. Aeronca, for example, commands a market price for its common stock twice that of its net current assets while Piper can show only about 20 percent of its market price to be represented in its working capital. The explanation probably lies in the special emphasis given these companies by virtue of their prominence as manufacturers of lightplanes.

It was this field which was given a tremendous impetus and where immediate orders far surpassed current productive rapacity. This unbalance is rapidly being corrected but the original condition was not without its market influence. Further, both Aeronca end Piper have preferred stocks outstanding which gives the common stock considerable leverage.

▸**Earning Power Key**—It is frequently misleading to assume that en equity is a bargain merely berausa it sells at a discount to its net current assets. In the final analysis, earning power is the key factor which determines the trend of market prices. However, all elements considered, there is a decided protective feature present in purchasing an equity with more than twice the price represented in readily liquid assets.

One reason such stocks sell at a discount is the fear that the companies may operate indefinitely at a loss and thus dissipate the present favorable cash position. None of these companies has indicated that it proposes to liquidate and distribute the proceeds to the stockholders. Nor has there been eny menifestations of the gradual retirement of outstanding stock. This, too, would be of decided benefit to the remaining equity holders.

▸**Sold at Discounts**—Equities of companies in this industry also sold at substantial discounts to their working capital positions. Certain companies followed the course of retiring a percentage of their outstending stock and curtailing operations when business was at a low ebb. Still others did nothing to adjust for the business cycle nor change their capital positions. In time, companies in the second group were forced into bankruptcy. It is these risks that are present that help account for present price disparities.

Working Capital and Market Price Relationships
Representative Aircraft Companies

Company	1945 Year-end Est. Working Capital Per Common Share	Approx. Market Price	Ratio Work. Cap. to Mkt. Price	Common Shares Outstanding
Aeronca	$5.00	$10.00	0.5	257,362
Beech	25.89	12.75	2.0	400,000
Bell	43.10	17.75	2.4	34,644
Boeing	42.00	21.00	2.0	1,082,434
Cessna	5.67	3.00	1.3	700,000
Cons-Vultee	37.00	17.00	2.3	1,570,266
Curtiss-W	11.64(a)	6.50	1.9	8,590,741
Douglas	109.49(b)	71.00	1.6	600,000
Fairchild E	3.51	4.50	1.2	1,615,787
Grumman	46.75	28.50	1.6	502,060
Lockheed	39.65	22.25	1.8	1,075,589
Martin	36.00	35.25	1.0	1,134,229
No. Amer.	12.75	11.13	1.2	3,435,033
Piper	2.50(b)	6.50	0.2	743,064
Republic	10.22	9.50	1.1	982,406
Ryan	6.25	6.25	1.0	412,993
United	32.49	18.50	2.1	2,656,701

Notes:
(a) Class A and Common combined
(b) First quarter of 1946.

★ ★

Arbitration Board Will Settle TWA-Pilot Battle Over Wages

Airline moves to resume operations as strike ends and ALPA eyes pay increases on other lines; pilot and two lawyers on key board.

By BLAINE STUBBLEFIELD

F. M. Swacker G. A. Spater

The arbitration agreement between TWA and striking pilots is merely a back-to-work armistice. A three-man board will decide this battle without any more fighting, but the wage war between pilots and operators will go on.

Contest will be in two phases.

Award by the 3-man arbitration board will be binding only on parties to the TWA dispute. Either or both sides will use any award advantages in pay and working rules, in an effort to impose similar terms in future negotiations on 4-engine flying. Both sides admit that either side could "lose his shirt" in the arbitration. Any substantial win by ALPA will signal a drive against all 4-engine equipment operators, with American and Eastern apparently out in front.

▸**Second Phase**—Probably soon after the award, Air Line Pilots Association will propose cost-of-living pilot pay increases on 2-engine planes as contract opening dates with various airlines come around. Two-engine contracts with TWA and American are already open.

Frank M. Swacker, New York lawyer, as third man and impartial member of the board, will hold decisive authority. Robert N. Buck, former chief pilot of TWA, and George A. Spater, member of TWA's New York law firm, will represent pilots and the airline management respectively.

The board will open hearings in Chicago between Dec. 18 and 23. ALPA and TWA will have 3 days each to present their cases, one day each for rebuttal, one-half day each for summation. Time for cross examination has not been determined. Within 10 days after close of hearings, board must render its award, effective at once and binding without recourse on both parties.

▸**All Night Session**—TWA and ALPA, after a final all-night session with chairman Frank P. Douglass of the National Mediation Board, signed arbitration terms which also set up 14 questions for exclusive consideration and answers by the board.

Behncke Signs: *Ending the 26-day-old Trans World Airlines pilot strike, David L. Behncke (right, seated) of ALPA signs agreement after all-night conference. Paul E. Richter (left) signed for the company as Jack Frye, TWA president and Judge Frank P. Douglass, Chairman, National Mediation Board (left to right, standing), look on. (Press Association)*

Highlights of the terms:

▸Any one or more of the 14 questions may be withdrawn by agreement of both parties.

▸The board's award shall be effective to Jan. 31, 1948, and thereafter, subject to TWA pilots employment agreement.

▸Any disagreement as to meaning or application of the awards shall be referred back to the board or a subcommittee thereof, whose majority decision shall be final.

▸ALPA agreed to lift the strike. Company agreed to strive for nor-

Back in the Air: *At controls in first TWA overseas flight from LaGuardia since pilots walked out on Oct. 21, Capt. Charles Maynard revs up the engines of Lockheed Constellation prior to taking off for Paris Nov. 16 (Press Association)*

mal operation by Dec 1, meanwhile to pro-rate pilots' flight time, to return all pilots to service by Dec 1 and to furlough none before then, to place any furloughed pilots on preference for new hiring, not to discriminate in any way against pilots who struck.

▸ Both agreed that the board need not be guided by any previous discussions, offers, or recommendations in the case.

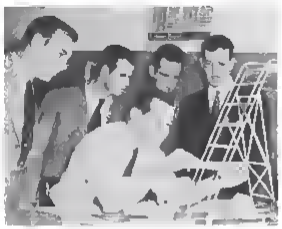
▸ David L Behncke, ALPA president issued a conciliatory statement assuring the public of renewed efforts toward safe flying, and wired TWA pilots to "get the airline operating full out in the shortest possible time."

▸ **Loss at $7,000,000**—Pres. Jack Frye said TWA had been damaged to an extent as yet undetermined. Company spokesmen placed revenue loss in the 3-week shutdown at about $7,000,000; wage losses to employees, including pilots, at about $3,500,000.

TWA sources said company could operate with about 1,000 of the 1,500 pilots formerly employed, and probably would. They said again they could not use the 350-400 pilots in training for jobs on new Constellations and Skymasters, orders for some of which were canceled.

An unknown percentage of the company's 15,000 furloughed ground employees have taken temporary or permanent jobs elsewhere, and many will not return. However, TWA, along with PCA and Pan American announced plans to discharge from 10 to 40 percent of their employes in different departments. Cutbacks by PCA and PAA were variously attributed to rising costs, to streamlining reorganizations, to the decline of air travel due to bad weather, to a mistaken public notion that airline accidents are more prevalent (Actually, fatalities per 100 million passenger miles have decreased, see p. 31). Some airline spokesmen report certain trips down to 50 percent of capacity. One official said there is widespread dissatisfaction with center-aisle seating in the 59-passenger DC-4s. Return of luxury liners to service is relieving pressure on overseas air capacity. Loading of TWA planes, as 16 grounded routes "very gradually" resumed schedules, was disappointing.

The airline wage negotiating committee, which has power of attorney to determine policy in all types of equipment, up to now has been beaten, in principle, by ALPA. The committee will have its say before the arbitration board, but Behncke can negotiate the airlines separately according to his planned strategy. However, the committee still can win if Swacker gives it a favorable opening through advantages to TWA, which is the wage guinea pig for the industry.



RESEARCH NUCLEUS:
Nucleus of a new research division at Braniff Airways are these new technical specialists of the line's engineering staff. Left to right they are H. H. Pool and Bernard Varnau, engineers; James Spain, supervisory draftsman, and G. W. Clark, engineer. Welfred Loyd (seated), supervisory draftsman, is explaining a loading ladder model Braniff expects to build soon for use in refueling and servicing its planes from trucks.

INTERNATIONAL CREW:
This crew of a FAMA Douglas DC-4 represents three countries. Left to right are Peter Nagurney, captain, and Lonnie Fredericks, first officer, U. S., Andrew Pedresa, co-pilot, Argentina; William Gillespie, radio officer, and William Ford, flight engineer, Canada, and Perla Moreno, stewardess, and Rodrigo Rodrigues, radio officer, Argentina. The Argentine line's plane landed at Pan American's international base at San Francisco Municipal Airport to pick up 4,000 lb. of DDT powder, needed in the Argentine to combat a locust plague.

Strike Toll

TWA compiled this sample list of cities hard hit by its cessation of service during the pilot strike:

Entirely without scheduled air service — Winslow, Ariz.; Terre Haute, Ind., Boulder City, Nev.

Without transcontinental service — Williamsport, Reading, Harrisburg and Pittsburgh, Pa., Topeka and Wichita, Kans.

Without direct service across the Atlantic—Washington, Chicago, Boston, Philadelphia.

Foreign cities without U. S. air carrier service — Paris, Geneva, Rome, Athens, Madrid, Cairo, Tunis, Algiers, Tripoli, Bengasi, Daharan.

Plane departures off 30 percent at Los Angeles, 90 percent at Albuquerque, 60 percent at Kansas City, 40 percent at St. Louis, 55 percent at Pittsburgh.

The strike also stopped the direct east-west link between Kansas City and St. Louis, and north-south service through Dayton, Toledo and Cincinnati.

Domestic Airline Accident Record Shows Improvement During 1946

Passenger fatalities drop to 1.2 per hundred million miles for first ten months of year; air accidents from all sources rise to 1,000 a month.

Certificated domestic airlines in the first ten months of 1946 have hung up a safety record far superior to the comparable 1945 mark, but the over-all rise in aircraft accidents this year has given the American public an opposite impression.

Official CAB figures show that 56 passengers and 14 crew members died in the five fatal accidents suffered by scheduled airlines between Jan. 1 and Oct. 30. In the same 1945 period, when far fewer plane miles were flown, 75 passengers and 14 crew members were killed in seven fatal crashes.

▸ **Fatalities Low**—An estimated 1.2 passenger fatalities occurred for each 100 million passenger miles flown during the first ten months of this year, compared with 2.6 fatalities per 100 million passenger miles flown from January through October, 1945.

Two more fatal airline crashes occurred this month—United Air Lines at Cleveland, two deaths; and Western Air Lines near Burbank, Cal., 11 deaths. But even if these accidents had taken place during the first ten months of 1946 an improved safety record would be shown.

The widely-held misapprehension that the certificated domestic airlines have a poor safety record this year has resulted largely from the extensive newspaper and radio publicity attendant to the crashes of commercial airliners outside continental U.S. as well as accidents involving uncertificated nonscheduled carriers and private flyers in this country. Spectacular but non-fatal domestic airline mishaps in which the planes were wrecked also have tended to cloud the true picture.

▸ **Accidents Rise**—Total non-military airplane accidents have risen from about 400 monthly during the war years to around 1,000 monthly with the sharp increase in private flying and non-airline commercial operations. Four fatal crashes, each involving a DC-3 operated by a nonscheduled carrier, have resulted in the death of 54 passengers and nine crew members this year.

Among the recent accidents which reflected unfairly on the domestic airlines were those of a Sabena (Belgian airline) DC-4 near Gander, Newfoundland, in September and an American Overseas Airlines DC-4 near Stephenville, Newfoundland, shortly afterward. Sixty-six persons died in these two mishaps.

As a result of two recent DC-4 accidents, one by United at Cheyenne Oct. 8 and the other by Eastern Air Lines near Alexandria, Va., Oct. 11 (the latter without fatalities), the Air Line Pilots Association is pressing CAB for a regulation requiring a third man in the cockpit of the four-engine craft. Both mishaps occurred during a landing under instrument conditions, and ALPA contends that either another pilot or a flight engineer should be on hand to relieve the captain and co-pilot of some of their responsibilities at such times.

▸ **No Comment**—Meanwhile, Safety Bureau officials refuse to comment on the apparently excessive accident rate among the larger uncertificated passenger-carrying airlines, whose four crashes are listed in the accompanying table. These companies, in operating less than 5 percent of the mileage flown by the certificated carriers, were involved in only one less fatal accident during the first 10 months of 1946.

Giant Radar Set Maps New York Sky

A group visit by airlines operations officials to the Airborne Instrument Laboratory at Mineola, Long Island, recently unveiled to the press and PICAO delegates, is in prospect for next spring.


W. E. Rhoades

Plans are for Air Transport Association's operations conference to inspect the installation, which some airline representatives are visiting individually in the meantime.

The laboratory boasts one of the three largest radars in the world. Topping a 75-ft. tower, it enables a scope to show all aircraft flying in the New York area. Delegates to Provisional International Civil Aviation Organization's air navigation conference, who visited the Mineola setup on their way to Montreal for a meeting on radio equipment standardization, cen-

Fatal Domestic Airline Accidents
(First 10 Months 1945 & 1946)

Carrier	Date	Location	Fatalities Crew	Fatalities Pass	Survivors Crew	Survivors Pass
All American	1/10/45	Greensb'g, Pa	1	0	1	0
American	1/19/45	Burbank, Cal	3	21	0	0
American	2/23/45	Marion, Va	2	15	1	4
PCA	4/14/45	Morgant'n, W. Va.	3	17	0	0
Eastern	7/12/45	Florence, S. C.	2(a)	1	6(a)	19
Eastern	9/7/45	Florence, S. C.	3	19	0	0
National	10/5/45	Lakeland, Fla.	0	2	3	10
(a) Includes 2 Army crew members killed & 2 survivors, midair crash						
PCA	1/6/46	Birm'g m, Ala.	3	0	1	7
Eastern	1/10/46	Cheshire, Conn.	4	14	0	0
United	1/31/46	Elk Mt., Wyo.	3	10	0	0
American	5/3/46	San Diego, Cal.	0	22	0	0
United	10/8/46	Cheyenne, Wyo.	0	2	4	41
(Nonscheduled Operators)						
Viking	5/16/46	Richmond, Va.	2	23	0	0
Trans Luxury	6/21/46	Medina, Ill.	2	0	0	23
Trans Luxury	9/5/46	Elko, Nev.	2	19	0	1
NATS (ie Tc.	10/17/46	Lecanle, Wyo.	3	10	0	0

Comparative Airline Safety Records
Scheduled Domestic Operations
(First 10 Months 1945 & 1946)

Description	Jan. 1-Oct. 30 1945	Jan. 1-Oct. 30 1946
Revenue miles flown	177,990,639	(*)250,964,586
Total accidents	38	20
Total fatal accidents	7(a)	5
Rev. miles per accident	4 683 964	12,548,229
Rev. miles per fatal accdt	25,427,234	50,192,916
Crew fatalities	14(b)	14
Passenger fatalities	75(c)	50
Rev. miles per pass. death	2,373,309	4,481,510
Rev. passenger miles flown	2,868,452,800	(*)4,751,859,620
Pass. miles per pass. death	38,246,037	61,351,636
Pass. deaths per 100 million pass. miles flown	2.6	1.2
(*) Estimated—based on first 9 months.		
(a) Excludes 1 fatal injury accident to occupants of non-air carrier plane. (Midair collision)		
(b) Excludes pilot of non-air carrier plane. (Midair collision)		
(c) Excludes 1 passenger of non-air carrier plane. (Midair collision)		

tered their interest on this installation.

Col. Weldon E. Rhoades, chief of ATA's Air Navigation and Traffic Control Division, says the radar will be supplemented later with a height-finding device. The radar indications also are relayed now to a scope in a Link trainer so that pilots can simulate flight in congested air traffic when visual observation is impossible.

The laboratory occupies three buildings and considerable acreage a few miles from Roosevelt Field. It started as a wartime project under Columbia University and Office of Scientific Research and Development auspices to develop secret communication equipment. Postwar financial help came from American Airlines until the present arrangement was effected by ATA, Aeronautical Radio, Inc., and Army and Navy. The airlines pay about a fifth of AIL's million-dollar annual budget.

Staff consists of 75 scientists and engineers and 200 technicians and clerks at the Laboratory, including men from MIT Radiation Laboratory, Harvard University, Radio Research Laboratory, and specialists who saw wartime duty with other companies, besides those previously at Mineola.

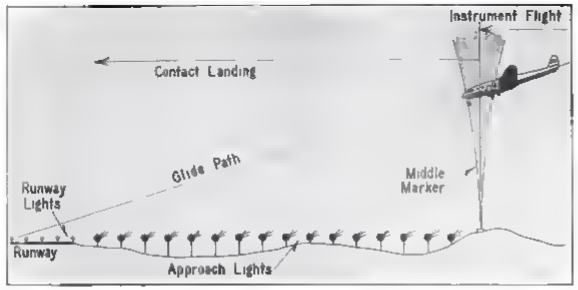
In addition to classified work for the military, AIL is busy with antenna design and location, testing and reports on suitability of air navigation and traffic control equipment, and other projects.

Jet Transport Record

U. S. airline operators had something new in transport speeds to think about last week.

The British Lancastrian, semi-jet commercial version of the Lancaster bomber, flew from London to Paris in 50 min., according to press reports—30 min. under normal airline schedule. Average speed of the plane was 247.5 mph. Flight was part of final tests for possible commercial passenger use.

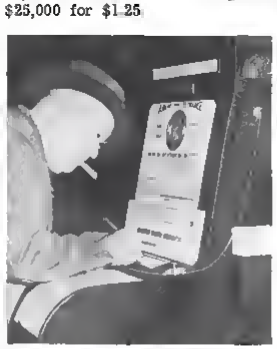
Craft carries 13 passengers and crew of five. Engines are Rolls-Royce manufacture, two Merlin reciprocating inboard and two Nene jets outboard. With all four the plane, pictured in AVIATION NEWS, Sept. 30, has flown more than 300 mph., with only the two jets, 250-280 mph.



APPROACH LIGHT TEST:
Drawing shows high intensity approach light system to be tested by ATA's Operations Conference at Newark, N. J., early next year, as an aid to landing under low visibility conditions.

12,000 2-Bit Policies Sold Via Insurograph

Five Insurographs installed at the Airlines Terminal and one at the Terminal Annex in New York City have sold 12,342 insurance policies to air travelers between Oct. 4 and Nov. 4, 1946, Associated Aviation Underwriters reports, following first full month of operation. Approximately 80 percent of policies sold through the vending machines were in the amount of $5,000. Maximum coverage is $25,000 for $1.25.



Air Insurance Far a Quarter: *W. G. Imboden, East Cleveland, O., executive salesman, fills out form at one of Associated Aviation Underwriters' Insurographs at New York Airlines Terminal. Daily sales averaged 400 in the first full month of operation, 80 percent of which were for $5,000 at 25 cents per policy. Maximum coverage is $25,000 a trip for $1.25. (International News Photo)*

Planning eventually to install Insurographs at all of the country's leading airports, subject to individual state approval, company says 50 percent of states already have approved use of the machines. Simple in operation, customer merely inserts 25-cent coin, fills out a form, signs it, and mails contract home.

Machines in New York are serving test-run purposes to eliminate mechanical bugs, all of which apparently have been solved.

Eleven Killed in Crash Of Western Air Lines DC-3

Recent loss of a Western Air Lines DC-3 with 11 aboard followed by less than 12 hrs. a near catastrophe involving a San Francisro-Los Angeles WAL DC-4 at Los Angeles Airport.

The big transport's wheels knocked 4 ft. from the top of an 18-ft. power line pole on the eastern boundary of the field. Pilot Ted Holman pulled up and flew to Long Beach Airport for a safe landing. Woodruff De Silva, Los Angeles Airport manager, said the pole was unlighted and was the lower of two lines of power poles bordering the airport, the higher series (30 ft.) on the opposite side of the highway being lighted. De Silva could not see, he said, how the transport could cross the field boundary at an altitude involving the low inner line of poles.

The DC-3 was found against a mountain peak after prolonged search. All aboard, including three crew members and eight passengers, were dead. The plane crashed in a snowstorm after reporting it was beginning its approach to Lockheed Airport at Burbank, Cal., where it was due at 4 a.m. from Salt Lake City. Pilot Garrel G. Miller, Van Nuys, Cal., had been with Western since 1942.

Trade Exhibit

Items from various parts of the world displayed by the airlines at the National Aircraft Show at Cleveland included brocade and jars of truffles and goose livers from Paris, a totem pole from Alaska, silverware from Norway, gardenias from Mexico, and orchids from a Seattle collection.

Russo-Swedish Pact Opens New Service

(McGraw-Hill World News)

Stockholm — The Russo-Swedish air traffic treaty, under which Stockholm-Helsingfors-Moscow service began Nov. 15 (AVIATION NEWS, Nov. 18) was signed in Moscow after two months' negotiations, and comprises agreement between Swedish and Russian Governments as well as Swedish Air Lines (ABA) and the Russia Company Aeroflot.

The new line is being operated jointly by the two companies, Swedish planes flying Stockholm-Helsingfors and Russian planes Helsingfors-Moscow. Winter's three trips a week likely will be increased later. The Douglas DC-3s on the line will require 7½ hours to go the route, including an hour for the plane change in Helsingfors. Planes will carry passengers, property and mail. A ticket from Stockholm to Moscow will cost about $120 while the Stockholm-Helsingfors trip will cost $36.

Except for countries in Eastern Europe, Sweden is the first to have regular air traffic with the Soviet Union. The agreement actually involves, however, only a resumption of the Stockholm-Moscow line operated by ABA and the Russian company from 1937 to the time of German attack on the Soviet Union in 1941. This line was the only prewar regular air link to Russia.

Another new link in the rapidly expanding network of the Swedish airlines probably will be forged soon with inauguration of regular services between Stockholm and Teheran. A survey flight on this route has been made by ABA.

Claim PAA Services To Boost Business

Charles A. Rheinstrom, former American Airlines vice-president and now an aviation consultant retained by Pan American Airways, declared last week that the type of high-speed nonstop domestic service proposed by PAA will create business rather than divert traffic from other U. S. airlines.

Testifying at CAB's Atlantic City hearing, now in its third week, Rheinstrom contended that existing domestic carriers are unable to concentrate on long-haul traffic between major American cities. PAA, he said, will not have to think in terms of intermediate service between the principal gateway cities but can consider the needs of the long-haul passenger exclusively, arranging flights especially for his benefit.

Rheinstrom took the stand following four days of testimony by, and cross examination of, John C. Leslie, PAA vice-president and the carrier's major policy witness. Leslie emphasized that Pan American's objective in asking for domestic trunk routes is to provide its foreign operations with a solid economic foundation based on free access to U. S. traffic sources.

PAA's postwar equipment program, which is to be carried out regardless of the outcome of its domestic route bid, will cost the carrier $100,000,000, of which about $35,000,000 has been paid to date, Leslie stated. Included in the procurement are 20 Constellations, 20 Stratocruisers, six Republic Rainbows, 20 Consolidated Vultee 240s, 50 modified C-54s and three Convair 37s.

National Will Begin Havana Run Dec. 15

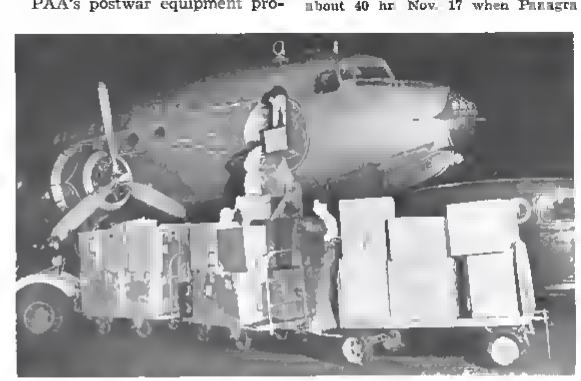
National Airlines' route to Havana, authorized in CAB's Latin American decision last May, will be inaugurated Dec. 15—in time to tap the winter tourist trade.

The new direct one-plane link between New York and the Cuban capital will be flown in less than seven hours with 46-passenger DC-4s. Initial southbound trips will be routed through Tampa, while northbound schedules from Havana will stop at both Miami and Tampa.

Other new services:

▶ **Northwest** early next month plans to open its "inside route" to Anchorage, Alaska, via the Twin Cities and Edmonton, Canada. Six DC-4s, modified to provide greater cargo space, will be available for the shortcut link. Initial service will be two or three roundtrips weekly. Opening of NWA's Orient route is now set for Feb.

▶ **Panagra** flights between New York and Santiago, Chile were shortened to about 40 hr. Nov. 17 when Panagra



EASTERN EXPANDING CARGO SERVICE:
Eastern Air Lines is in the first month of its expanded cargo service. Previously restricted largely to newspapers and periodicals to a few points on its system, the service has been extended to all commodities and all points served by EAL. Basic rate is the usual 26½ cents per ton mile. Picture shows a ton of shoes being loaded into a DC-4 at La-Guardia Field for delivery in Miami. Eastern, which is credited with having inaugurated the first regular scheduled all-cargo service June 1, 1942, is handling its cargo on an airport-to-airport basis. Pickup and delivery will be provided when arrangements can be made.

inaugurated DC-4 night operations south from Lima, Peru.

▶ **Scandinavian Airlines System** direct airline service between the U. S. and Moscow was opened Nov. 18 when an SAS DC-4 took off from New York for Stockholm on the first leg of the new connecting operation. At Stockholm, U. S. passengers can board the A. B. Aerotransport (Swedish) plane for Helsinki, Finland where they may transfer to the Aeroflot (Russian) DC-3 for the balance of the trip.

▶ **Trans-Canada Air Lines** has opened its Victoria, B. C., to Seattle service with three roundtrips daily.

Montego Bay Service

Recommendations that Pan American Airways and Chicago & Southern Air Lines be permitted to serve Montego Bay, Jamaican winter resort, on their Caribbean routes have been made by CAB examiner Barron Fredericks. Eastern Air Lines' application to stop at Montego Bay should be denied, Fredericks said.

Chinese Buy Equipment

China National Aviation Corp., whose main maintenance and overhaul shop will be located in Shanghai, has purchased a complete line of aircraft maintenance and test equipment from Pacific Airmotive Corp., Glendale, Cal.

SHORTLINES

▶ **American's** board approved a regular quarterly dividend of 87½ cents per share on $3.50 cumulative convertible preferred stock, to be paid Dec. 1 to stockholders of record Nov. 21. Payment of a dividend on common stock was withheld in view of "lower level" 1946 earnings and 1947's re-equipment program . . . Freight carried to Alaska by American's air cargo division during the West Coast shipping strike amounted to more than 400 tons for the 60 days to mid-November.

▶ **Braniff** has set up a Latin American traffic division under W. R. Beattie as general manager, a new post with headquarters in Dallas until they can be established in South America. Paul D. Niles, sales promotion manager, becomes general traffic manager, domestic division. Douglass Wood, who formerly directed traffic activities of the line's central division, succeeds Beattie as manager of agency, interline and foreign sales. The central area, which now includes western sector cities on routes between Denver and Memphis, will be headed by R. T. Phinney at Denver.

▶ **Colonial** flew 16,012,036 express pound miles in October to set a record with an increase of 227 percent over the same month last year. Passenger traffic was 19 percent higher than a year ago and mail pound miles had jumped 28 percent.

▶ **Northwest** has completed its acquisition of DC-4s and is operating 11 of them and 22 DC-3s . . . First survey flight to the Orient will be made in a DC-4 shortly after Dec. 1. Stops will be at Tokyo, Shanghai, Manila and other cities including points in Korea, Manchuria and China . . . All NWA flights will carry children for half fare starting Dec. 15. The cut already is in effect on flights to and from Alaska.

▶ **Pan American** claims a Honolulu-Los Angeles record of 9 hrs. Flight was made in a Constellation piloted by Capt. S. E. Robbins, and time was 6 min. under previous record set last May.

▶ **PCA** pilots are aiding weather forecasters by radioing last minute reports on conditions aloft to the Weather Bureau, sometimes as many as 100 a day.

▶ **Trans-Canada,** which began operations in 1937, recently carried its millionth passanger.

▶ **United** revenue passenger miles for October totaled 103,187,600, an increase of 82 percent over the same month last year. Revenue plane miles had increased 28 percent to 4,987,100.

▶ **United** plans to establish half fares for children under 12 on and after Dec. 15.

CAB ACTION

The Civil Aeronautics Board

● Dismissed applications of Skyfreight Airlines (Docket 2423), South Air Freight Express Co. (Docket 2004), Pioneer Intermountain Airways (Docket 2280), Federal Air Freight (Docket 2309) and Vernon E. Anderson et al. (Docket 2450) from skyfreight case (Docket 810 et al.) At appellants' request.

● Permitted Monarch Air Lines to serve Salt Lake City, Provo and Price, Utah; Grand Junction, Colo., and Farmington and Albuquerque, N. Mex., on AM 73 through Salt Lake City Municipal Airport No. 1, Carbon County Airport, Walker Field Airport, Farmington Municipal Airport and Kirtland Field Airport, respectively.

● Dismissed applications of Slope Air Service (Dockets 1758 and 1784), K. B. Hodson (Docket 1751), Paul Runyan Airlines (Docket 2036), Hemidy Airlines (Docket 2220) and Leonardo N. Rennewanz (Docket 23831 from Dakota area case (Docket 1708 et al.). For want of prosecution.

CAB SCHEDULE

Dec. 2 Hearing on airfreight case at Washington, D. C. (Docket 810 et al.)

Dec. 6 Oral argument in Cincinnati-New York route case. (Docket 221 et al.)

Dec. 16 Hearing in Fan American Airways-Atlantic rate case. (Docket 1700.)

Dec. 18 Hearing on foreign air carrier route application of Far Eastern Air Transport. (Docket 227a.)

Dec. 48. Oral argument on route consolidation applications of Braniff and Chicago & Southern. Postponed from Dec. 2 (Docket 1154 et al.)

Dec. 20 Exchange of exhibits in case involving additional Florida area service. (Docket 997 et al.)

Dec. 20 Exchange of exhibits in freight forwarder case. Postponed from Nov. 15 (Docket 881 et al.)

Jan. 7. Exchange of exhibits in Caribbean-Atlantic Airlines' application for foreign routes. (Docket 2246.)

Jan. 15. Hearing on Caribbean-Atlantic Airlines application for foreign routes (Docket 2246.)

Jan. 20. Hearing in case involving additional Florida area service. (Docket 997 et al.)

Feb. 12. Hearing in freight forwarder case. Postponed from Jan. 19 (Docket 881 et al.)

No-Shop Levy Approved

CAB has approved the agreement adopted by IATA's North Atlantic Traffic Conference in September providing for a service fee on refunds for unused tickets not canceled before takeoff. The "no show" penalty will be 25 percent of the fare, with a $50 maximum and will be imposed by the U. S., French, Danish, British, Dutch, Norwegian, Swedish and Canadian lines certificated over the North Atlantic.

India Air Pact Clears Way for TWA, Panam

(McGraw-Hill World News)

New Delhi, India—TWA and Pan American hope to be operating regular services to and through India by the end of the year, according to members of the U. S. air mission which recently concluded a bilateral agreement with the Indian Government.

A 10-man technical unit which accompanied the mission surveyed airports the two lines propose to use, while final terms of the agreement were being settled.

Five weeks of negotiations culminated in a pact patterned after the Bermuda agreement and giving full commercial rights, including the fifth freedom, over routes awarded to PAA and TWA in 1945 by the Civil Aeronautics Board.

Air Express Up

The national total of 270,966 air express shipments in September, according to Air Express Division of Railway Express Agency, was 67 percent higher than the same month a year ago. Revenue therefrom was up 62 percent. Shipments for the first nine months of the year, numbering 2,099,385, were 29 percent above the same period a year ago.

Saving Fixed Base Charter Service

The Safety Bureau of the Civil Aeronautics Board has distributed for industry comment amendments it proposes to Part 42 of the Civil Air Regulations, affecting nonscheduled air carrier certification and operation rules. Industry comment reflected by the Aeronautical Training Society and Hawthorne Flying Service shows convincing protests to promulgation of these safety regulations as they stand in draft release 46-6.

The Aeronautical Training Society, after polling its members who conduct fixed base or charter operations from about 150 bases in 38 states, goes on record to the Safety Bureau with the positive declaration that the suggested revisions not only go beyond necessary demands but are needlessly restrictive as applied to fixed base charter operations.

Beverly Howard, president of Hawthorne Flying Service, informs the Board that passage of these amendments will mean that "The legitimate charter operator almost without exception will be completely out of business as far as any night time or instrument operations are concerned." For example, not even a modern $60,000 twin-engined transport manufactured last January will meet the proposed requirements.

Safety Bureau officials acknowledge privately that some of the amendments set up arbitrary limits, and have no relation whatsoever to the past record of safety. Their argument advanced to date is that limits must be set "somewhere," and that they propose that no single-engine aircraft shall be used for night and instrument operation in passenger charter. Furthermore, additional demands would be placed on such multi-engine aircraft to the extent that the operator must approach scheduled air carrier requirements.

Wayne Weishaar, secretary of ATS, points out to the Safety Bureau the difference between the group of veteran-operated nonscheduled carriers, with their Douglas twin- and four-engined transports virtually identical to airliners flown by the certificated carriers, and the hundreds of smaller charter services conducted mainly as subsidiaries to fixed base operations and flying schools.

These are the pre-war air taxi groups—mainly using smaller planes at hundreds of small airports—which set up an excellent safety record before the war, and whose existence was recognized and protected by the CAB's original order exempting them from economic provisions of the Civil Aeronautics Act in 1938.

The Board at that time, ATS points out convincingly, indicated that it recognized airline operation as one category, and legitimate charter operation as something else apart.

"The public interest is not served by confusing them now, or seeking to subject them to similar regulations when in fact the businesses are largely dissimilar in nature." How many public service commissions require the same safety standards for taxicabs as for city buses? Yet they are both automobiles. Still, the Safety Bureau is attacking the problem of regulation, admittedly a tough nut to crack, by starting on the false premises that it can regulate all accidents out of existence, and that all airplanes are inherently dangerous. This is the sort of 1920 thinking we had hoped was ended in Washington.

The Safety Bureau's recommendations are arbitrary and most of them fail utterly to consider the accident record of the past. We hope they were included in the draft release "to arouse comment," as they say in the bureaus. We hope the CAB will consider long and carefully before it attempts to put the independent fixed base charter operator out of business.

Surplus Airports—A Mess

Scores of municipalities are clamoring for action from War Assets Administration. They are demanding their airports, which were taken over by the armed services for war use. Most have already been declared surplus by Army and Navy. The rest is up to WAA. A glimpse at WAA's "achievement" shows ample justification for the clamor.

A total of 800 to 900 airports were taken over, about 70 percent municipally owned.

Of this number, certifications representing approximately 600 airports declared surplus so far by Army and Navy have been forwarded from WAA to Civil Aeronautics Administration. CAA officially defines which property on each field is aeronautical, and rules out non-aviation construction or equipment which may have been added to the air base, and is to be disposed of separately.

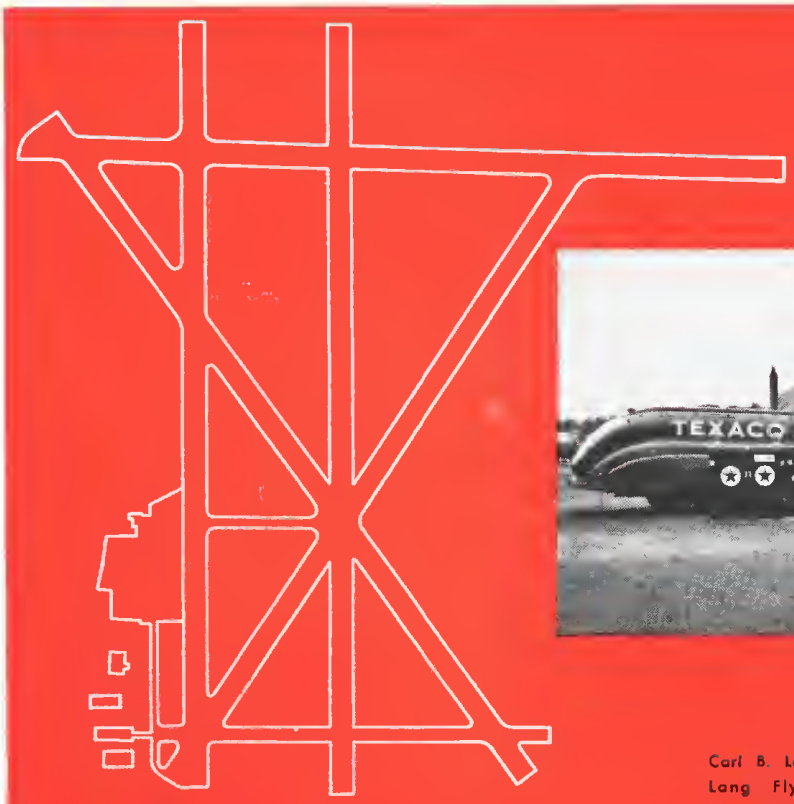
CAA officials say they have completed this definition of aeronautical property for 525 airports since January 1, and have turned the cases back to WAA for final processing.

Yet, up to the middle of last week WAA since January 1 had returned the amazing total of five airports to their owners. Officials hastened to add, however, that there were at least 10 more in the mill!

Meanwhile, aviation is hog-tied in hundreds of communities, at a time when airports are needed as never before. Some relief has come from issuance of about 15 temporary permits by the Army and Navy, allowing municipal use of fields already declared surplus but which are hung up in WAA red tape. About 270 more permits are to be granted, the matter has become so desperate. But these are momentary expedients, and municipalities are still powerless to execute binding, long-term leases to fixed base operators and other tenants until the property is returned to them by the government.

How about some action, Mr. Littlejohn?

ROBERT H. WOOD



Lang Flying Service hangar, located at southwest corner of fields (see map). Omaha Municipal Airport has used and sold Texaco Aviation Products for more than 13 years

Carl B. Lang, owner of Lang Flying Service, Omaha, Nebraska.

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